



Photograph 1: SASV020p, West, Upstream



Photograph 2: SASV020p, East, Downstream





Photograph 3: SASV020p, North, Across Stream



# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed tributary to Krause Creek		Waterbody ID: SASV024i
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: DCR, CDC
Tract Number(s): WI-AS-198.000		Nearest Milepost: 28.6	Associated Wetland ID(s): WASV076f	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 5 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 1 ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 5 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 5 ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> 5 ft.
Depth of Water: (Approx.) 4-12 in.		N/A <input type="checkbox"/>		
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) 0 fps		Bank height Right: 2 ft. Left: 2 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		Bank slope Right: 90 degrees Left: 90 degrees
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: ___% ___% 2% 10% 88% ___% ___% ___%				
Width of Riparian Zone: 100ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: (approx.) 20 in. 2 in. N/A in.		
Dominant Bank Vegetation (list): <i>Carex crinita, Glyceria striata, Alnus incana</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Pools				
Aquatic Organisms Observed (list): None				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				



**Waterbody ID:**

SASV024i

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

**Notes:**

SASV024i is an oxbow of Krause Creek (SASV019p); water is not flowing but is present throughout reach.

**Waterbody Sketch** (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Linear Waterbody Point Photographs  
Line 5 Wetland Delineation  
October 11, 2019, Page 1 of 2



Photograph 1: SASV024i, West, Upstream



Photograph 2: SASV024i, East, Downstream





Photograph 3: SASV024i, North, Across Stream

# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Krause Creek		Waterbody ID: SASV019p
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: DCR, CDC
Tract Number(s): WI-AS-198.000		Nearest Milepost: 23.1	Associated Wetland ID(s): WASV059, WASV076f, WASV077	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial				
Waterbody Type: (check one) <input checked="" type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>15</u> ft. Height: <u>2</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: <u>25</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>15</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> <u>15</u> ft.	Depth of Water: (Approx.) N/A <input type="checkbox"/> <u>2</u> ft.	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) <u>2</u> fps N/A <input type="checkbox"/>	Bank height Right: <u>6</u> ft. Left: <u>4</u> ft.	Bank slope Right: <u>90</u> degrees Left: <u>70</u> degrees	
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input checked="" type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: <u>70</u> % <u>5</u> % <u>5</u> % <u>10</u> % <u>  </u> % <u>10</u> % <u>  </u> % <u>  </u> %				
Width of Riparian Zone: N/A <input type="checkbox"/> <u>&gt;500ft.</u>	Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <u>4</u> in. <input checked="" type="checkbox"/> Saplings/Shrubs: <u>1</u> in. <input checked="" type="checkbox"/> Herbs: <u>N/A</u> in. Avg. DBH of Dominants: (approx.)			
Dominant Bank Vegetation (list): <i>Fraxinus pensylvanica, Alnus incana, Betula alleghaniensis</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): leaf packs, large submerged wood, riffles, pools				
Aquatic Organisms Observed (list): None				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Beaver dam blown out across stream				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				



Waterbody ID:

SASV019p

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

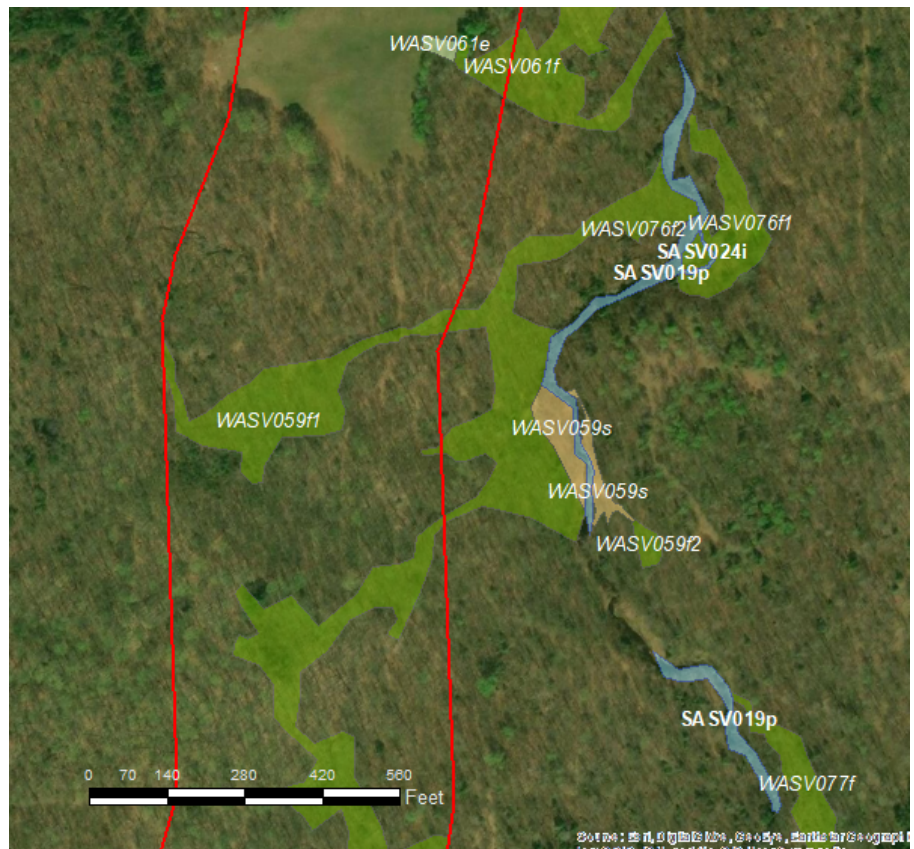
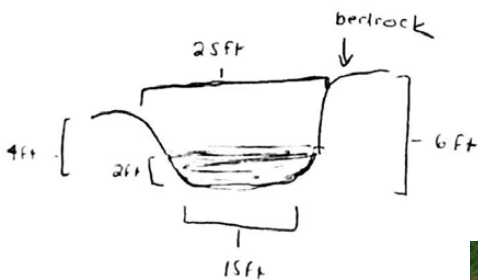
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

#### Notes:

SASV019p (Krause Creek) is primarily composed of bedrock and boulders; grade control present throughout, deep pools, submerged wood present. Beaver dam located on left bank where river crosses into study area on north end. WASV059, WASV076f, and WASV077 act in part as floodplains to stream.

#### Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Linear Waterbody Point Photographs  
Line 5 Wetland Delineation  
October 4, 2019, Page 1 of 2



Photograph 1: SASV019p, South, Upstream



Photograph 2: SASV019p, North, Downstream





Photograph 3: SASV019p, East, Across Stream

# Linear Waterbody Data Sheet

Survey Description					
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed tributary to Krause Creek		Waterbody ID: sasw014	Date: 10/4/2019
State: WI WI	County: Ashland	Company: WEST	Crew Member Initials: ES/WC	Photos: 7824, 27, 29	
Tract Number(s): WI-AS-200.000, WI-AS-400-008.000		Nearest Milepost 23.6	Associated Wetland ID(s): wasw031f, wasw030f		
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial					
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:					
OHWM Width: <u>3.5</u> ft. Height: <u>0.5</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank: <u>5</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>8</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> <u>3</u> ft.	Depth of Water: (Approx.) N/A <input type="checkbox"/> <u>0.5</u> ft.		
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) <u>0.2</u> fps N/A <input type="checkbox"/>	Bank height Right: <u>1</u> ft. Left: <u>1</u> ft.	Bank slope Right: <u>80</u> degrees Left: <u>90</u> degrees		
Qualitative Attributes					
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____% _____% <u>25</u> % _____% _____% <u>75</u> % <u>15</u> % _____%					
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ft.	Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) <u>10</u> in. <u>2.5</u> in. _____in.				
Dominant Bank Vegetation (list): <i>Betula alleghaniensis</i> and <i>Abies balsamea</i> on banks, <i>Carex bromoides</i> , banks and edge of channel dominated by tussocks. Saplings <i>Alnus incana</i> , <i>Ostrya virginiana</i>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Tussock mounds, overhanging <i>Carex</i> , leaf packs, riffles and runs, mostly glides present rather than deep pools					
Aquatic Organisms Observed (list):					
T&E Species Observed (list):					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none					
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low					



**Waterbody ID:**

sasw014

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

**Notes:**

Stream substrate varies from large rock/cobble and boulder upstream to leaf litter, silt and smaller cobble downstream. Stream becomes tussock wetland wasw031f upstream and on top of ridge.

**Waterbody Sketch** (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





sasw014



# Linear Waterbody Data Sheet

Survey Description					
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed tributary to Krause Creek		Waterbody ID: sasw013	Date: 10/3/2019
State: WI	County: Ashland	Company: WEST	Crew Member Initials: ES/WC	Photos: 7805, 7807, 7811, 7816	
Tract Number(s): WI-AS-400-008.000		Nearest Milepost 23.7		Associated Wetland ID(s): wasw030f, wasw032ss	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial					
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:					
OHWM Width: <u>3</u> ft. Height: <u>4in</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank: <u>5</u> ft.		Width of Waterbody - Toe of Slope to Toe of Slope: <u>6</u> ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> <u>3</u> ft.	
Depth of Water: (Approx.) N/A <input type="checkbox"/> <u>0.5</u> ft.		Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u>0.6</u> fps N/A <input type="checkbox"/>	
Bank height Right: <u>2</u> ft. Left: <u>1</u> ft.		Bank slope Right: <u>80</u> degrees Left: <u>75</u> degrees			
Qualitative Attributes					
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: <u>      </u> % <u>      </u> % <u>15</u> % <u>      </u> % <u>65</u> % <u>25</u> % <u>      </u> % <u>      </u> %					
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> <u>      </u> ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: <input type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) <u>15</u> in. <u>3</u> in. <u>  </u> in.			
Dominant Bank Vegetation (list): <i>Carex pedunculata</i>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs, riffles present, leaf litter and woody debris, overhanging cepitose <i>Carex</i> species					
Aquatic Organisms Observed (list): None observed					
T&E Species Observed (list):					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Upstream livestock, pasture, and farm in adjacent parcel to the west					
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low					



**Waterbody ID:**

sasw013

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

**Notes:**

Stream substrate varies from large rock and boulder upstream in west portion of parcel, to leaf litter, silt and smaller cobble downstream

**Waterbody Sketch** (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)







# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-15	<b>Waterbody Survey ID:</b> sasc043i
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Krause Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> BRG/JSW	<b>Latitude:</b> 46.343554	<b>Longitude:</b> -90.675695
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> The feature is a long intermittent stream with a rocky cobble substrate. Banks are densely vegetated, and the feature is associated with (and fed by) a surrounding wetland features (wasc073e and wasc074e).			
Measurements			
<b>Depth of Water:</b> <u>0.4</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>3</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> <b>OHWM Width:</b> <u>3</u> ft.	
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Populus tremuloides, Acer rubrum, Fraxinus pennsylvanica, Fraxinus nigra, Abies balsamea, Carex pensylvanica, Pyrola elliptica, Symphyotrichum lateriflorum, Alnus incana.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Runoff from nearby gravel road, culverts, nearby residential land use.			
<b>Observation Notes:</b> The feature meanders and has a wetland fringe. A rain event was occurring at the time of survey.			





sasc043i\_N (downstream)



sasc043i\_S (upstream)





sasc043i\_W (across)



## **APPENDIX F**

Waterbody Data Sheets

Part 14 of 24

# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-20	<b>Waterbody Survey ID:</b> sasa040p
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> Krause Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> NTT/DGL	<b>Latitude:</b> 46.341805	<b>Longitude:</b> -90.681892
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Perennial stream within a large forested wetland (wasa087f).			
Measurements			
<b>Depth of Water:</b> <u>0.5</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>9</u> ft. <input type="checkbox"/> N/A	
<b>OHWM Width:</b> <u>10</u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Ulmus americana, Carex gracillima, Pteridium aquillinum, Acer rubrum.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools, overhanging roots.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
<b>Observation Notes:</b> None.			





sasa040p\_E (across)



sasa040p\_N (upstream)





sasa040p\_S (downstream)



# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-20	<b>Waterbody Survey ID:</b> sasa044i
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Krause Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> NTT/DGL	<b>Latitude:</b> 46.341676	<b>Longitude:</b> -90.684365
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Intermittent stream that meanders down a hillside and connects to a mapped perennial creek (sasa040p). Feature flows through wetland wasa087f.			
Measurements			
<b>Depth of Water:</b> _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> _____ ft. N/A <input checked="" type="checkbox"/>	
<b>OHWM Width:</b> <u>  6  </u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Betula alleghaniensis, Equisetum sylvaticum, Matteuccia struthiopteris, Carex crinita.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools of water throughout.			
<b>Aquatic Organisms Observed (list):</b> Frogs.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
<b>Observation Notes:</b> No water currently present. Large moss-covered boulders present throughout.			



sasa044i\_E (downstream)



sasa044i\_N (across)





sasa044i\_W (upstream)

## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-21	<b>Waterbody Survey ID:</b> sasa045e
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Krause Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> NTT/DGL	<b>Latitude:</b> 46.340924	<b>Longitude:</b> -90.681726
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Ephemeral drainage that meanders down a steep hillside. Moss-covered boulders throughout.			
Measurements			
<b>Depth of Water:</b> _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> _____ ft. N/A <input checked="" type="checkbox"/>	
<b>OHWM Width:</b> <u>  2  </u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Pteridium aquilinum, Abies balsamea, Populus tremuloides.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): No water present throughout the drainage.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
<b>Observation Notes:</b> None.			





sasa045e\_N (downstream)



sasa045e\_S (upstream)





sasa045c\_W (across)



## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-20	<b>Waterbody Survey ID:</b> sasa043i
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Krause Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> NTT/DGL	<b>Latitude:</b> 46.339648	<b>Longitude:</b> -90.684164
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> The waterbody is a intermittent channel that runs downhill and connects to a mapped perennial stream (sasa040p). Moss-covered boulders throughout the channel with deep pools present.			
Measurements			
<b>Depth of Water:</b> <u>1</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> <u>6</u> ft. N/A <input type="checkbox"/>	
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <small>(check all that apply)</small>		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Abies balsamea, Dryopteris intermedia.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools of water.			
<b>Aquatic Organisms Observed (list):</b> Frogs present.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Debris and fallen tree limbs throughout.			
<b>Observation Notes:</b> Water currently flowing through channel. Seems to flow consistently throughout most of the year.			



sasa043i\_NE (downstream)



sasa043i\_S (across)





sasa043i\_SW (upstream)

## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-07	<b>Waterbody Survey ID:</b> sasb005e
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Bad River	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> MAL/SAM	<b>Latitude:</b> 46.341349	<b>Longitude:</b> -90.673968
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> A simple drainage ditch situated between an intact forest and gravel roadway. Feature is nearly fully vegetated with hydrophytic vegetation but clearly created to drain water off the landscape and thereby classified as a waterbody ditch instead of a wetland.			
Measurements			
<b>Depth of Water:</b> _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> _____ ft. N/A <input checked="" type="checkbox"/>	
<b>OHWM Width:</b> <u>  1  </u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> The bank of the ditch on the trail road is mowed while the south side is dominated by mesic hardwood species including <i>Betula alleghaniensis</i> , <i>Tilia americana</i> , and <i>Pteridium aquilinum</i> .			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Adjacent to roadside.			
<b>Observation Notes:</b> No water currently present.			





sasb005e\_E (across)



sasb005e\_N (upstream)





sasb005e\_S (downstream)



# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-07	<b>Waterbody Survey ID:</b> sasb003e
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> None	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> MAL/SAM	<b>Latitude:</b> 46.340891	<b>Longitude:</b> -90.672248
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> A simple drainage ditch situated between an intact forest and vegetated (mowed) trail. Feature is fully vegetated with hydrophytic vegetation but clearly created to drain water off the landscape and thereby classified as a waterbody ditch instead of a wetland.			
Measurements			
<b>Depth of Water:</b> _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> _____ ft. N/A <input checked="" type="checkbox"/>	
<b>OHWM Width:</b> <u>  2  </u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> The bank of the ditch on the trail road is mowed while the south side is dominated by mesic hardwood species including <i>Betula alleghaniensis</i> , <i>Osmunda claytoniana</i> , and <i>Athyrium filix-femina</i> .			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
<b>Observation Notes:</b> Fed upslope serving as a mechanism to drain water associated with surrounding landscape. Flow from both west and the east. All being directed towards the culvert which ultimately feeds beneath trail and draining to the north. Not deemed a wetland due to the functional role of the feature, despite being fully vegetated.			



sasb003e\_E (downstream)



sasb003e\_S (across)





sasb003e\_W (upstream)

## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-07	<b>Waterbody Survey ID:</b> sasb004e
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> None	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> MAL/SAM	<b>Latitude:</b> 46.340613	<b>Longitude:</b> -90.671833
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input checked="" type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Natural swale within intact mesic hardwood forest. Feature drains to the north toward mowed, vegetated, trail and connects with feature sasb003e. Slight meander. Starting point is well elevated above the end point.			
Measurements			
<b>Depth of Water:</b> _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> _____ ft. N/A <input checked="" type="checkbox"/>	
<b>OHWM Width:</b> _____ ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Dominated by mesic hardwood species including Betula alleghaniensis, Osmunda claytoniana, and Athyrium filix-femina.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
<b>Observation Notes:</b> No water currently present.			





sasb004e\_E (downstream)



sasb004e\_S (across)





sasb004e\_W (upstream)



# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-20	<b>Waterbody Survey ID:</b> sasa042i
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Krause Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> NTT/DGL	<b>Latitude:</b> 46.336085	<b>Longitude:</b> -90.681301
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Intermittent drainage that runs down a steep hillside that ends in a diffuse flow within a mapped wetland complex (wasa085f).			
Measurements			
<b>Depth of Water:</b> <u>0.25</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>6</u> ft. <input type="checkbox"/> N/A	
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <small>(check all that apply)</small>		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Ulmus americana, Fraxinus nigra, Acer saccharum, Pteridium aquilinum, Carex intumescens.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools of water throughout.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Old logging road runs parallel to the drainage.			
<b>Observation Notes:</b> Flowing at southernmost portion leading downhill into diffuse flow.			



sasa042i\_E (across)



sasa042i\_NW (downstream)





sasa042i\_SE (upstream)

# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-15	<b>Waterbody Survey ID:</b> sasa069i
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Bad River	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> KDF/DGL	<b>Latitude:</b> 46.339012	<b>Longitude:</b> -90.668333
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
<b>Description Notes:</b> The intermittent stream is located within a large hardwood swamp community (wass038f).			
Measurements			
<b>Depth of Water:</b> <u>0.25</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> <u>3</u> ft. N/A <input type="checkbox"/>	
<b>OHWM Width:</b> <u>4</u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
<b>Dominant Bank Vegetation (list):</b> Carex bromoides, Carex pedunculata, Betula alleghaniensis, Acer rubrum, Ostrya virginiana, Dryopteris intermedia.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Erosion.			
<b>Observation Notes:</b> None.			





sasa069i\_E (downstream)



sasa069i\_S (across)





sasa069i\_W (upstream)



# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-20	<b>Waterbody Survey ID:</b> sasa041e
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Krause Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> NTT/DGL	<b>Latitude:</b> 46.3367531	<b>Longitude:</b> -90.683206
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Ephemeral drainage that meanders down a steep hillside. Moss-covered boulders present throughout. Pools of water present along the drainage with flowing water in portions.			
Measurements			
<b>Depth of Water:</b> _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> _____ ft. N/A <input checked="" type="checkbox"/>	
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Ulmus americana, Fraxinus nigra, Pteridium aquilinum.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
<b>Aquatic Organisms Observed (list):</b> Frogs.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): No disturbances.			
<b>Observation Notes:</b> Thick duff layer surrounding the drainage.			



sasa041e\_E (across)



sasa041e\_NW (downstream)





sasa041e\_S (upstream)

## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-07	<b>Waterbody Survey ID:</b> sasa008p
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Bad River	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> NTT/DGL	<b>Latitude:</b> 46.337599	<b>Longitude:</b> -90.662046
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> The waterbody is a perennial stream that flows through a large wetland complex.			
Measurements			
<b>Depth of Water:</b> <u>1</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>5</u> ft. <input type="checkbox"/> N/A	
<b>OHWM Width:</b> <u>5</u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Fraxinus nigra, Alnus incana, Laportea canadense, Elymus virginicus, Symphyotrichum puniceum.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Flowing water with pools for aquatic invertebrates and frogs.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Beaver activity.			
<b>Observation Notes:</b> Logs and debris throughout with evidence of beaver activity.			





sasa008p\_E (across)



sasa008p\_NE (upstream)





sasa008p\_SW (downstream)



## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-26	<b>Waterbody Survey ID:</b> sasc029e
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> None	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> BRG/JSW	<b>Latitude:</b> 46.327704	<b>Longitude:</b> -90.681782
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input checked="" type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> The feature is a small roadside ditch associated with wetland wasc040e.			
Measurements			
<b>Depth of Water:</b> <u>0.1</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> <u>0.5</u> ft. N/A <input type="checkbox"/>	
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Sagittaria latifolia, Calamagrostis canadensis, Scirpus cyperinus.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Overhanging vegetation.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Polluted runoff, runoff from gravel road and mowed field.			
<b>Observation Notes:</b> The stream receives runoff from the adjacent gravel road, and only exists due to the roadside location.			



sasc029e\_E (downstream)



sasc029e\_S (across)





sasc029e\_W (upstream)

## Open Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-26	<b>Waterbody Survey ID:</b> oasc002
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> None	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> BRG/JSW	<b>Latitude:</b> 46.327279	<b>Longitude:</b> -90.681409
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> Stock Pond <input type="checkbox"/> Natural Pond <input checked="" type="checkbox"/> Fishing Pond <input type="checkbox"/> Lake <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Feature Quality:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low <small>(check one)</small>			
<b>Feature Description:</b> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Description Notes:</b> The feature is a large pond with a densely vegetated shoreline. Emergent vegetation is present around the entirety of the waterbody. The waterbody is associated with wetland feature wasc039e, which is a seep that discharges water into the waterbody.			
Measurements			
<b>Depth of Water:</b> _____ ft. <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Unknown			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Sagittaria latifolia, Nymphaea odorata, Scirpus cyperinus, Phalaris arundinacea, Glyceria canadensis, Juncus effusus.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Aquatic emergent vegetation.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Runoff from surrounding mowed area, invasive species spread from roadside.			
<b>Observation Notes:</b> The waterbody is, or was historically, used for fishing, as evidenced by a small dock and beached canoe outside of the survey area on the opposite side of the pond.			





oasc002\_N



oasc002\_NE





oasc002\_SE



# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-30	<b>Waterbody Survey ID:</b> sasa065i
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> None	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> NTT/DGL	<b>Latitude:</b> 46.322016	<b>Longitude:</b> -90.678305
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> The waterbody is an intermittent stream that meanders down a steep hillside. Steep side slopes are present along the waterbody.			
Measurements			
<b>Depth of Water:</b> <u>0.5</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>3</u> ft. <input type="checkbox"/> N/A	<b>OHWM Width:</b> <u>5</u> ft.
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Fraxinus nigra, Carex bromoides, Dryopteris intermedia.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
<b>Observation Notes:</b> Large boulders present along wetland fringe. Feature associated with wetland wasa128f.			



sasa065i\_N (upstream)



sasa065i\_S (downstream)





sasa065i\_W (across)

# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-19	<b>Waterbody Survey ID:</b> sase003e
<b>State:</b> Wisconsin	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Silver Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> KDF/ARK	<b>Latitude:</b> 46.371907	<b>Longitude:</b> -90.723766
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> The ephemeral stream is located in a ravine within a northern mesic forest. The stream connects to sase002e and discharges into nearby river. Trees line the bank.			
Measurements			
<b>Depth of Water:</b> _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> _____ ft. N/A <input checked="" type="checkbox"/>	
<b>OHWM Width:</b> __1__ ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Fraxinus nigra, Athyrium filix-femina, and Carex pedunculata.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Downed woody debris.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
<b>Observation Notes:</b> No water currently present.			





sase003e\_E (downstream)



sase003e\_S (upstream)





sase003e\_W (across)



## **APPENDIX F**

Waterbody Data Sheets

Part 15 of 24

## Open Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-30	<b>Waterbody Survey ID:</b> oasd001
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> None	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> MAL/OTG	<b>Latitude:</b> 46.319596	<b>Longitude:</b> -90.678633
<b>Survey Type:</b> <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> Stock Pond <input type="checkbox"/> Natural Pond <input type="checkbox"/> Fishing Pond <input type="checkbox"/> Lake <input checked="" type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Feature Quality:</b> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Description Notes:</b> The feature is an oxbow off of the Bad River which is fed from a culvert associated with County Hwy GG. Associated with wetland wasd002s.			
Measurements			
<b>Depth of Water:</b> <u>  3  </u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Alnus incana, Salix petiolaris.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Open water.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): The feature receives polluted runoff from the roadway and has invasive species cover at the margins.			
<b>Observation Notes:</b> There were recent heavy rains and vegetation is currently inundated within the center of the feature.			





oasd001\_E



oasd001\_N



oasd001\_W



# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-02	<b>Waterbody Survey ID:</b> sasd004p
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> Bad River	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> AGG/OTG	<b>Latitude:</b> 46.317817	<b>Longitude:</b> -90.677316
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input checked="" type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Perennial river manipulated by railroad tracks, bridges, and culverts. Associated with wetland wasd002f.			
Measurements			
<b>Depth of Water:</b> <u>7</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>45</u> ft. <input type="checkbox"/> N/A	
<b>OHWM Width:</b> <u>45</u> ft.			
<b>OHWM Indicator:</b> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Acer saccharinum, Doellingeria umbellata, Solidago gigantea, Alnus incana.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Overhanging vegetation, overhanging banks, riffles, pools, woody debris.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Culverts, railroads, bridges.			
<b>Observation Notes:</b> The Bad River is a perennial river that flows through recently logged forest. The majority of the vegetation along the stream is presently shrubs. There is a high amount of erosion present on the stream banks. The river is part of a large wetland complex.			



sasd004p\_E (upstream)



sasd004p\_N (downstream)





sasd004p\_NE (across)

## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-02	<b>Waterbody Survey ID:</b> sasd005i
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Bad River	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> AGG/OTG	<b>Latitude:</b> 46.314993	<b>Longitude:</b> -90.677351
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Intermittent feature associated with wetland wasd006f.			
Measurements			
<b>Depth of Water:</b> <u>1</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>1</u> ft. <input type="checkbox"/> N/A	
<b>OHWM Width:</b> <u>1</u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Fraxinus nigra, Ilex verticillata, Carex bromoides.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools, overhanging vegetation.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Culverts.			
<b>Observation Notes:</b> The feature is an intermittent stream that flows through wetland wasd006f. There are areas within the wetland where the stream channel becomes poorly defined but it becomes more defined further on.			





sasd005i\_N (downstream)



sasd005i\_SW (upstream)





sasd005i\_W (across)



# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-03	<b>Waterbody Survey ID:</b> sasc032i
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Bad River	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> BRG/JSW	<b>Latitude:</b> 46.309388	<b>Longitude:</b> -90.671161
<b>Survey Type:</b> <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> The feature is a small intermittent stream running downslope from a mesic forest into a roadside ditch wetland (wasc049e). The stream is fed by hillside seepage, and is associated with seep wetland wasc050f.			
Measurements			
<b>Depth of Water:</b> <u>0.1</u> ft.    N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> <u>2</u> ft.    N/A <input type="checkbox"/>	
<b>OHWM Width:</b> <u>2</u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Fraxinus pennsylvanica, Fraxinus nigra, Betula alleghaniensis, Osmunda claytoniana, Dryopteris intermedia, Athyrium filix-femina, Ulmus americana, Thuja occidentalis, Acer rubrum, Carex bromoides.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Overhanging vegetation.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Runoff from nearby paved road, historic logging.			
<b>Observation Notes:</b> Rain events occurred in the days prior to survey.			



sasc032i\_E (upstream)



sasc032i\_N (across)





sasc032i\_W (downstream)

## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-03	<b>Waterbody Survey ID:</b> sasc033e
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Bad River	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> BRG/JSW	<b>Latitude:</b> 46.309749	<b>Longitude:</b> -90.666254
<b>Survey Type:</b> <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> The feature is a small stream that dissipates into wetland wasc051. The feature is naturally occurring but likely only exists due to landscape manipulation by logging activity.			
Measurements			
<b>Depth of Water:</b> <u>0.2</u> ft.    N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> <u>3</u> ft.    N/A <input type="checkbox"/>	
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Fraxinus nigra, Rumex obtusifolius, Calamagrostis canadensis, Acer saccharum, Carex crinita, Glyceria striata.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Woody debris.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Logging activity.			
<b>Observation Notes:</b> Rain events occurred prior to the time of survey.			





sasc033e\_E (across)



sasc033e\_N (downstream)





sasc033e\_S (upstream)



# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-03	<b>Waterbody Survey ID:</b> sasc034e
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Bad River	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> BRG/JSW	<b>Latitude:</b> 46.309764	<b>Longitude:</b> -90.665881
<b>Survey Type:</b> <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> The feature is a small intermittent stream that only exists due to logging disruption in the area. The stream flows through wetland wasc051e.			
Measurements			
<b>Depth of Water:</b> <u>0.3</u> ft.    N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> <u>2</u> ft.    N/A <input type="checkbox"/>	
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Persicaria sagittata, Pinus resinosa, Scirpus cyperinus, Juncus tenuis.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Riffles.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Logging activity.			
<b>Observation Notes:</b> The feature is somewhat erosional and may be fed in part by groundwater.			



sasc034e\_E (downstream)



sasc034e\_N (across)





sasc034e\_W (upstream)

# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-03	<b>Waterbody Survey ID:</b> sase016p
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Bad River	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> NTT/ARK/MAL	<b>Latitude:</b> 46.308893	<b>Longitude:</b> -90.662110
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> The waterbody is a meandering perennial stream that flows through two hardwood swamp communities.			
Measurements			
<b>Depth of Water:</b> <u>1</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>3</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> <b>OHWM Width:</b> <u>3</u> ft.	
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Carex crinita, Carex bromoides, Fraxinus nigra, Betula alleghaniensis.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Overhanging vegetation.			
<b>Aquatic Organisms Observed (list):</b> Frogs.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Old logging roads throughout wetlands.			
<b>Observation Notes:</b> Feature associated with wase050f and wasc051f.			





sase016p\_E (across)



sase016p\_N (downstream)





sase016p\_S (upstream)



# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-27	<b>Waterbody Survey ID:</b> sase014p
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to City Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> KDF/ARK	<b>Latitude:</b> 46.305464	<b>Longitude:</b> -90.655086
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> The perennial stream is located within wet-mesic forest, with trees lining the banks.			
Measurements			
<b>Depth of Water:</b> <u>0.5</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>8</u> ft. <input type="checkbox"/> N/A	<b>OHWM Width:</b> <u>8</u> ft.
<b>OHWM Indicator:</b> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Fraxinus nigra, Abies balsamea, Betula alleghaniensis, Carex intumescens, Carex crinita, Carex projecta, Athyrium filix-femina.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Submerged wood, overhanging banks and roots.			
<b>Aquatic Organisms Observed (list):</b> Aquatic invertebrates.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
<b>Observation Notes:</b> Feature associated with wetlands wase025 and wase026.			



sase014p\_NE (downstream)



sase014p\_NW (across)





sase014p\_SW (upstream)

## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-05	<b>Waterbody Survey ID:</b> sase017e
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to City Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> NTT/ARK	<b>Latitude:</b> 46.304680	<b>Longitude:</b> -90.651778
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Ephemeral stream that flows through a coniferous swamp (wase067f).			
Measurements			
<b>Depth of Water:</b> <u>0.25</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>1</u> ft. <input type="checkbox"/> N/A	
<b>OHWM Width:</b> <u>1</u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Betula alleghaniensis, Alnus incana, Carex crinita, Cornus canadensis, Juncus effusus.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Standing water throughout portions of the waterbody due to recent heavy rainfall.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
<b>Observation Notes:</b> None.			





sase017e\_E (downstream)



sase017e\_S (across)





sase017e\_W (upstream)



# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-05	<b>Waterbody Survey ID:</b> sase018i
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to City Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> NTT/ARK	<b>Latitude:</b> 46.304113	<b>Longitude:</b> -90.648657
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Intermittent stream associated with a hardwood swamp (wasa122f).			
Measurements			
<b>Depth of Water:</b> <u>1</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>3</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> <b>OHWM Width:</b> <u>3</u> ft.	
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Betula alleghaniensis, Carex crinita.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Riffles, woody debris.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
<b>Observation Notes:</b> Feature continues outside survey corridor.			



sase018i\_NE (downstream)



sase018i\_NW (across)





sase018i\_SW (upstream)

# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-28	<b>Waterbody Survey ID:</b> sasa063i
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to City Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> NTT/DGL	<b>Latitude:</b> 46.302810	<b>Longitude:</b> -90.647198
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Intermittent meandering stream that flows through a mesic hardwood forest.			
Measurements			
<b>Depth of Water:</b> <u>0.2</u> ft.    N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> <u>4</u> ft.    N/A <input type="checkbox"/>	
<b>OHWM Width:</b> <u>6</u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Abies balsamea.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Open water.			
<b>Aquatic Organisms Observed (list):</b> Frogs.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): ATV trail bisects the waterbody. Travels through a culvert.			
<b>Observation Notes:</b> Associated with wetland wasa124f.			





sasa063i\_NE (downstream)



sasa063i\_SW (upstream)





sasa063i\_W (across)



## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-28	<b>Waterbody Survey ID:</b> sasa064i
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to City Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> NTT/DGL	<b>Latitude:</b> 46.303093	<b>Longitude:</b> -90.647708
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input checked="" type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
<b>Description Notes:</b> Intermittent drainage that connects to sasa063i. Steep side slopes.			
Measurements			
<b>Depth of Water:</b> <u>0.5</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>1</u> ft. <input type="checkbox"/> N/A	
<b>OHWM Width:</b> <u>4</u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
<b>Dominant Bank Vegetation (list):</b> Abies balsamea, Betula papyrifera, Populus tremuloides, Oryzopsis asperifolia.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Open water.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
<b>Observation Notes:</b> None.			



sasa064i\_E (downstream)



sasa064i\_S (across)





sasa064i\_W (upstream)

# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-17	<b>Waterbody Survey ID:</b> sasd020e
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> None	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> MAL/AGG	<b>Latitude:</b> 46.300628	<b>Longitude:</b> -90.647954
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> The waterbody flows from an access road through a mixed forest community and ultimately ends at a hardwood swamp.			
Measurements			
<b>Depth of Water:</b> _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> _____ ft. N/A <input checked="" type="checkbox"/>	
<b>OHWM Width:</b> <u>  2  </u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Acer saccharum, Betula papyrifera.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
<b>Observation Notes:</b> The feature is fed by sasb019e and terminates in wetland wasd035f.			





sasd020e\_NE (downstream)



sasd020e\_S (across)





sasd020e\_SW (upstream)



## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-17	<b>Waterbody Survey ID:</b> sasd019e
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> None	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> MAL/AGG	<b>Latitude:</b> 46.300503	<b>Longitude:</b> -90.647677
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
<b>Water Appearance:</b> <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
<b>Feature Description:</b> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
<b>Flow Regime:</b> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
<b>Description Notes:</b> The feature runs parallel to an access road at the base of a slope.			
Measurements			
<b>Depth of Water:</b> _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> _____ ft. N/A <input checked="" type="checkbox"/>	
<b>OHWM Width:</b> <u>  2  </u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
<b>Dominant Bank Vegetation (list):</b> Acer saccharum, Quercus rubra, Dryopteris intermedia, Symphyotrichum lateriflorum.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): The feature is disturbed by frequent human activity within the access road.			
<b>Observation Notes:</b> The feature is a tributary to stream sasd020e.			



sasd019e\_E (upstream)



sasd019e\_N (across)





sasd019e\_W (downstream)

## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-28	<b>Waterbody Survey ID:</b> sasd001p
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> City Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> AGG/MDL	<b>Latitude:</b> 46.302604	<b>Longitude:</b> -90.641241
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
<b>Existing Condition<sup>a</sup>:</b> <input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
<b>Description Notes:</b> Perennial stream (City Creek) associated with a hardwood swamp community (wasd001f).			
Measurements			
<b>Depth of Water:</b> <u>1.5</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>6</u> ft. <input type="checkbox"/> N/A	
<b>OHWM Width:</b> <u>8</u> ft.			
<b>OHWM Indicator:</b> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
<b>Dominant Bank Vegetation (list):</b> Betula papyrifera, Betula alleghaniensis, Equisetum hyemale.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools, riffles.			
<b>Aquatic Organisms Observed (list):</b> Aquatic insects.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
<b>Observation Notes:</b> The perennial stream flows through forest dominated by birch trees along the banks. The feature is natural and high-quality.			





sasd001p\_E (upstream)



sasd001p\_NW (downstream)





sas001p\_S (across)



## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-28	<b>Waterbody Survey ID:</b> sasd002p
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to City Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> AGG/MDL	<b>Latitude:</b> 46.302283	<b>Longitude:</b> -90.640594
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Perennial tributary to City Creek. Associated with wetland wasd001f.			
Measurements			
<b>Depth of Water:</b> <u>0.5</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>3</u> ft. <input type="checkbox"/> N/A	
<b>OHWM Width:</b> <u>4</u> ft.			
<b>OHWM Indicator:</b> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Betula alleghaniensis, Equisetum hyemale.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools, riffles.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
<b>Observation Notes:</b> The perennial stream flows through forest dominated by yellow birch. It terminates in City Creek.			



sasd002p\_E (across)



sasd002p\_N (downstream)





sasd002p\_S (upstream)

# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Devils Creek		Waterbody ID: SASV021p
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: DCR, CDC
Tract Number(s): WI-AS-536.000, WI-AS-593.000		Nearest Milepost: 28.5	Associated Wetland ID(s): WASV070	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 25 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 3 ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 40 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 25 ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> 23 ft.
Depth of Water: (Approx.) 1 ft.		N/A <input type="checkbox"/>		
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) 1 fps		Bank height Right: 4 ft. Left: 3 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		Bank slope Right: 90 degrees Left: 20 degrees
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: ___% ___% 80% 10% ___% 10% ___% ___%				
Width of Riparian Zone: N/A <input type="checkbox"/> >500ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: (approx.) 12 in. 1 in. N/A in.		
Dominant Bank Vegetation (list): <i>Alnus incana, Picea glauca, Ulmus americana</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): submerged wood, overhanging roots, riffles, pools				
Aquatic Organisms Observed (list): <i>Coleoptera, Ephemeroptera, caddisflies (2 species), Plecoptera.</i>				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				



**Waterbody ID:**

SASV021p

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

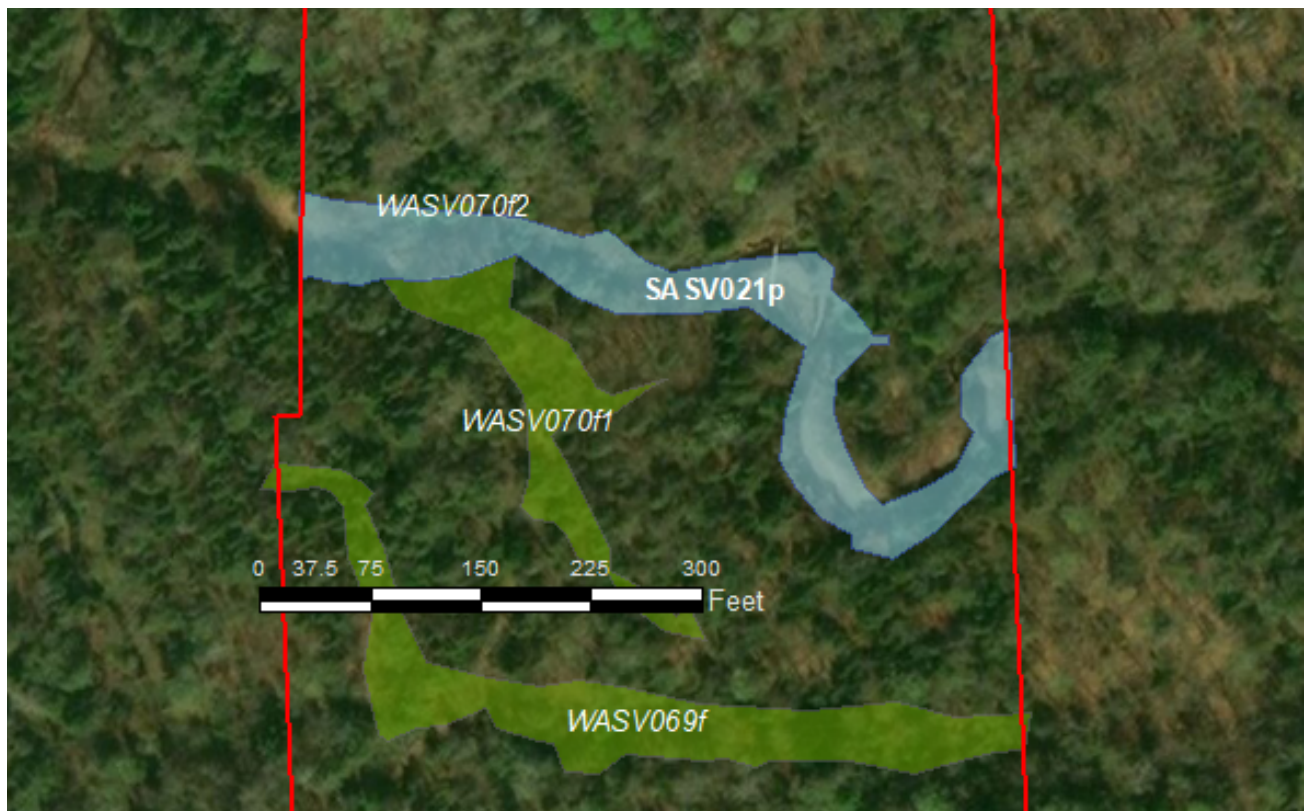
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

**Notes:**

Devils Creek (SASV021) bisects study area, flowing east to west.

**Waterbody Sketch** (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)







Photograph 1: SASV021p, East, Upstream



Photograph 2: SASV021p, West, Downstream





Photograph 3: SASV021p, North, Across Stream

## **APPENDIX F**

Waterbody Data Sheets

Part 16 of 24



# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed tributary to Devils Creek		Waterbody ID: SASV023i
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: DCR, CDC
Tract Number(s): WI-AS-400.000-628.000		Nearest Milepost: 28.6	Associated Wetland ID(s): WASV073f	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 3 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 1 ft.		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 9 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 3 ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> 3 ft.
Depth of Water: (Approx.) 3-4 in.		N/A <input type="checkbox"/>		
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) 0.5 fps		Bank height: Right: 4 ft. Left: 4 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		Bank slope: Right: 90 degrees Left: 20 degrees
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: ___% 5% 30% 40% 25% ___% ___% ___%				
Width of Riparian Zone: 100ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: (approx.) 12 in. 2 in. N/A in.		
Dominant Bank Vegetation (list): <i>Abies balsamea, Betula alleghaniensis, Thuja occidentalis</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs, overhanging banks, riffles, pools				
Aquatic Organisms Observed (list): None				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SASV023i

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

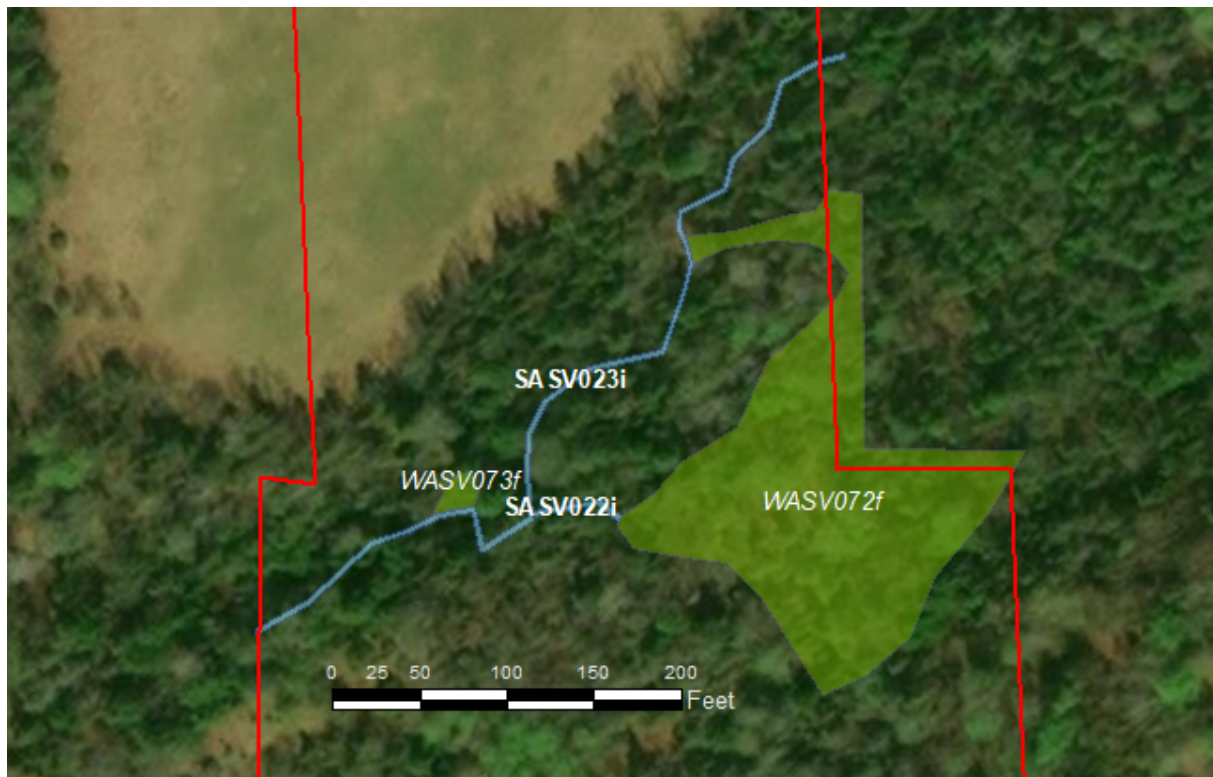
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

#### Notes:

SASV023i flows across study area northeast to southwest. SASV022i connects to stream, and WASV073f is a small floodplain bench. Low flow present in stream after recent rains suggests stream is intermittent. Grade control, channel downcutting, substrate sorting, and riffle/pool sequences are all present in stream.

#### Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Linear Waterbody Point Photographs  
Line 5 Wetland Delineation  
October 10, 2019, Page 1 of 2



Photograph 1: SASV023i, Northeast, Upstream



Photograph 2: SASV023i, Southwest, Downstream





Photograph 3: SASV023i, West, Across Stream



# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed tributary to Devils Creek		Waterbody ID: SASV022i
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: DCR, CDC
Tract Number(s): WI-AS-400.000-628.000		Nearest Milepost: 28.6	Associated Wetland ID(s): WASV072	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 3 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 1 ft.		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 4 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 3 ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> 0.5 ft.
Depth of Water: (Approx.) 1 in.		N/A <input type="checkbox"/>		
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: (Approx.) 0.25 fps		Bank height: Right: 1 ft. Left: 3 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		Bank slope: Right: 80 degrees Left: 80 degrees
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% 10% 60% 30% _____% _____% _____%				
Width of Riparian Zone: 100ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: (approx.) 8 in. 2 in. N/A in.		
Dominant Bank Vegetation (list): <i>Abies balsamea, Acer saccharum, Dryopteris intermedia</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs				
Aquatic Organisms Observed (list): None				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				

**Waterbody ID:**

SASV022i

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

**Notes:**

Stream originates from headwater wetland WASV072f at headcut and connects to SASV023i.

**Waterbody Sketch** (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Linear Waterbody Point Photographs  
Line 5 Wetland Delineation  
October 10, 2019, Page 1 of 2



Photograph 1: SASV022i, South, Upstream



Photograph 2: SASV022i, North, Downstream





Photograph 3: SASV022i, West, Across Stream



# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed tributary to Devils Creek		Waterbody ID: SASV025p
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: DCR, CDC
Tract Number(s): WI-AS-400-636.000		Nearest Milepost: 29.00	Associated Wetland ID(s): WASV082f	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 8 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 3 ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 10 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 6 ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> 6 ft.
Depth of Water: (Approx.) N/A <input type="checkbox"/> 6 in.				
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) 0.5 fps		Bank height Right: 4 ft. Left: 4 ft.
Bank slope Right: 90 degrees Left: 45 degrees				
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate:      %      %      5 %      60 %      35 %      %      %      %				
Width of Riparian Zone: 200ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: (approx.) 6 in. 1 in. N/A in.		
Dominant Bank Vegetation (list): <i>Acer saccharum, Fraxinus nigra, Rubus pubescens</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs, riffles/pools				
Aquatic Organisms Observed (list): Caddisflies				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				

**Waterbody ID:**

SASV025p

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

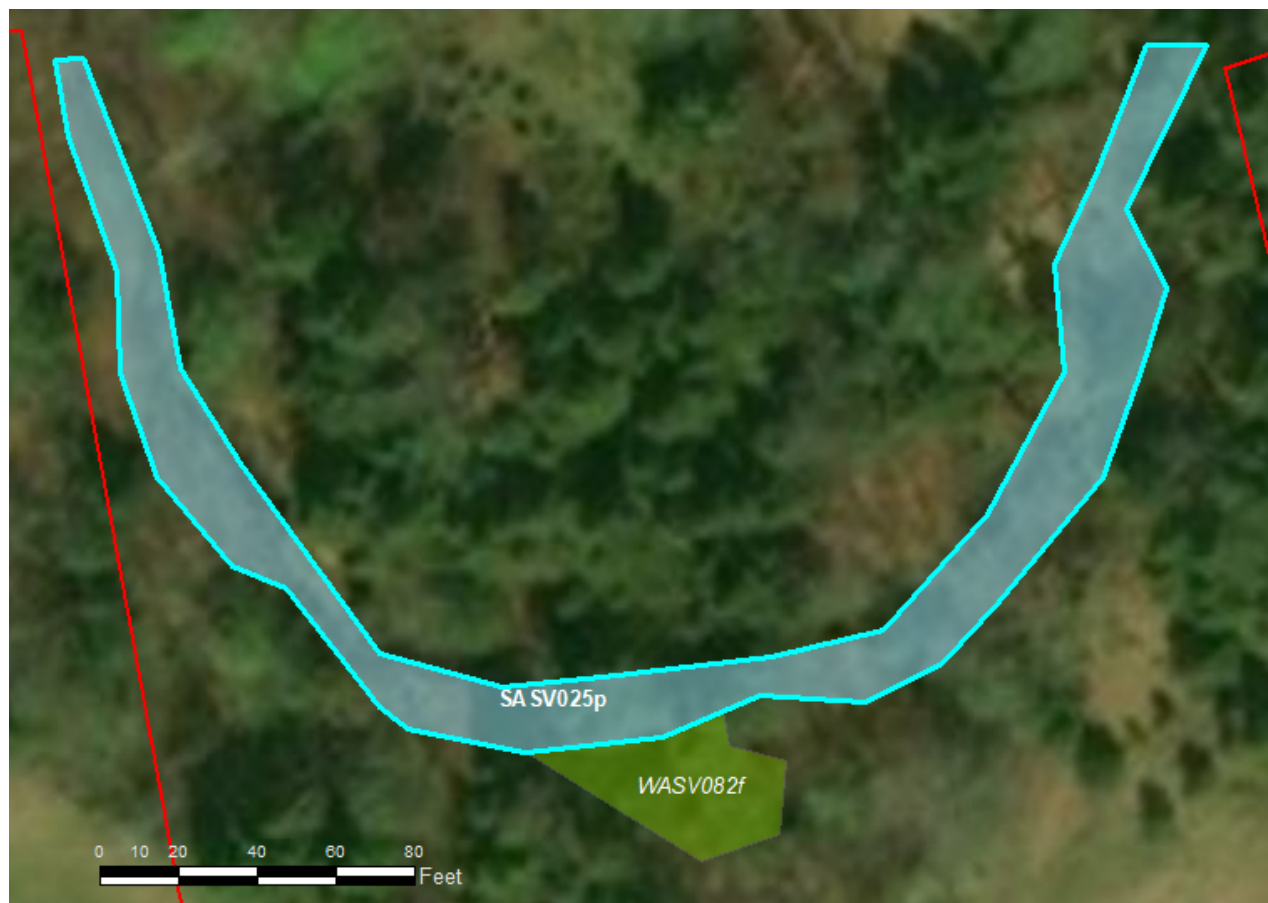
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

**Notes:**

Perennial stream bisects study area flowing east to west. Floodplain wetland WASV082f on south side of stream.

**Waterbody Sketch** (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Linear Waterbody Point Photographs  
Line 5 Wetland Delineation  
October 12, 2019, Page 1 of 2



Photograph 1: SASV025p, East, Upstream



Photograph 2: SASV025p, West, Downstream





Photograph 3: SASV025p, North, Across Stream



# Linear Waterbody Data Sheet

Survey Description					
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed tributary to Devils Creek		Waterbody ID: sasw016	Date: 10/8/2019
State: WI	County: Ashland	Company: West	Crew Member Initials: ES,WC	Photos: 7930, 38, 42-43,47-48	
Tract Number(s): WI-AS-400-665.000		Nearest Milepost: 29.0	Associated Wetland ID(s): none		
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial					
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:					
OHWM Width: <u>6</u> ft. Height: <u>1</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank: <u>10</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>12</u> ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u>6</u> ft.	Depth of Water: (Approx.) N/A <input type="checkbox"/> <u>10</u> in <u>  </u> ft.		
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) <u>1</u> fps N/A <input type="checkbox"/>	Bank height Right: <u>2</u> ft. Left: <u>4</u> ft.	Bank slope Right: <u>90</u> degrees Left: <u>90</u> degrees		
Qualitative Attributes					
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: <u>  </u> % <u>  </u> % <u>20</u> % <u>40</u> % <u>  </u> % <u>40</u> % <u>  </u> % <u>  </u> %					
Width of Riparian Zone: N/A <input type="checkbox"/> <u>60</u> ft.	Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: <input type="checkbox"/> Saplings/Shrubs: <input type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) <u>16</u> in. <u>5</u> in. <u>0</u> in.				
Dominant Bank Vegetation (list): herbaceous layer sparse, dominated by leaf litter. <i>Betula alleghaniensis</i> , <i>Acer sachharum</i> dominant trees. <i>Alnus incana</i> dominate shrub					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Log jams leaf packs, runs, glides, riffles and pools all present					
Aquatic Organisms Observed (list): Fish present. Fast, darting fish 3-5 inches					
T&E Species Observed (list):					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Flows west nearby SR 77.					
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low					

**Waterbody ID:**

sasw016

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

**Notes:**

Swift flow, diverse instream habitats, banks mostly indicative of upland hydrology and topography, large boulders upstream. Stream partially flows south out of assigned parcel

**Waterbody Sketch** (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)











# Linear Waterbody Data Sheet

Survey Description					
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed roadside ditches/swales		Waterbody ID: sasw019	Date: 10/12/2019
State: WI	County: Ashland	Company: WEST	Crew Member Initials: ES,WC	Photos: 8096-98, 8103,05	
Tract Number(s): WI-AS-400-673.000		Nearest Milepost 29.1		Associated Wetland: wasw043ss	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial					
Waterbody Type: (check one) <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:					
OHWM Width: <u>3</u> ft. Height: <u>4in</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank: <u>4</u> ft.		Width of Waterbody - Toe of Slope to Toe of Slope: <u>4</u> ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> <u>    </u> ft.	
Depth of Water: (Approx.) N/A <input checked="" type="checkbox"/> <u>    </u> ft.					
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u>    </u> fps N/A <input checked="" type="checkbox"/>		Bank height Right: <u>0.75</u> ft. Left: <u>0.75</u> ft.	
Bank slope Right: <u>80</u> degrees Left: <u>90</u> degrees					
Qualitative Attributes					
Water Appearance: (check one) <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other: mud					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: <u>    </u> % <u>    </u> % <u>    </u> % <u>    </u> % <u>    </u> % <u>85</u> % <u>15</u> % <u>    </u> %					
Width of Riparian Zone: N/A <input type="checkbox"/> <u>45</u> ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: <u>12</u> in. <input type="checkbox"/> Saplings/Shrubs: <u>2</u> in. <input type="checkbox"/> Herbs: <u>    </u> in. Avg. DBH of Dominants: (approx.)			
Dominant wetland vegetation: <i>Abies balsamea</i> , <i>Scirpus cyperinus</i> , <i>Juncus effusus</i>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): No water or flow					
Aquatic Organisms Observed (list): None observed					
T&E Species Observed (list):					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Ditch and swale drain adjacent SR 77					
Waterbody is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated					
Stream Quality <sup>a</sup> : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low					

**Waterbody ID:**

sasw019

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

**Notes:**

Ephemeral, dry swale and ditch that drain wasw043ss and adjacent roadside, SR 77

**Waterbody Sketch** (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)











# Linear Waterbody Data Sheet

Survey Description					
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed tributary to Devils Creek		Waterbody ID: sasw020	Date: 10/12/2019
State: WI	County: Ashland	Company: WEST	Crew Member Initials: ES, WC	Photos: 8150, 8151, 8153	
Tract Number(s): WI-AS-400-673.000		Nearest Milepost 29.3		Associated Wetland: wasw045f	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial					
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:					
OHWM Width: <u>4</u> ft. Height: <u>0.5</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank: <u>15</u> ft.		Width of Waterbody - Toe of Slope to Toe of Slope: <u>6</u> ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> <u>5</u> ft.	
Depth of Water: (Approx.) N/A <input type="checkbox"/> <u>6 in</u> ft.		Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) <u>0.33</u> fps N/A <input type="checkbox"/>	
Bank height Right: <u>1</u> ft. Left: <u>5</u> ft.		Bank slope Right: <u>60</u> degrees Left: <u>90</u> degrees			
Qualitative Attributes					
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other: mud					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: <u>      </u> % <u>      </u> % <u>20</u> % <u>      </u> % <u>      </u> % <u>65</u> % <u>15</u> % <u>      </u> %					
Width of Riparian Zone: N/A <input type="checkbox"/> <u>45</u> ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) <u>12</u> in. <u>2</u> in. <u>      </u> in.			
Dominant vegetation: <i>Ostrya virginiana</i> saplings, <i>Fraxinus</i> trees, <i>Carex bromoides</i> , <i>Glyceria striata</i>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf litter, riffles, runs, pools, logjams, moss, tussocks, overhanging tussocks					
Aquatic Organisms Observed (list): None observed					
T&E Species Observed (list):					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Stream drains from Wetland wasw045f. Logged, felled trees dominant landscape at stream outlet with wasw045f					
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low					

**Waterbody ID:**

sasw020

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

**Notes:**

Water flows west, tussock fringe on banks of stream approximately 5f width of wetland fringe on banks

**Waterbody Sketch** (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)







sasw020





## **APPENDIX F**

Waterbody Data Sheets

Part 17 of 24

# Linear Waterbody Data Sheet

Survey Description					
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed tributary to Montreal Creek		Waterbody ID: sasw017	Date: 10/8/2019
State: WI	County: Ashland	Company: WEST	Crew Member Initials: ES/WC	Photos: 7976,79,82,85,86	
Tract Number(s): WI-AS-400-724.000		Nearest Milepost 29.6, 29.7		Associated Wetland ID(s): wasw036f, wasw037ss	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial					
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:					
OHWM Width: <u>4</u> ft. Height: <u>1.5</u> ft. N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank: <u>8</u> ft.		Width of Waterbody - Toe of Slope to Toe of Slope: <u>4</u> ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> <u>4</u> ft.	
Depth of Water: (Approx.) N/A <input type="checkbox"/> <u>10</u> in					
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: (Approx.) <u>0.33</u> fps N/A <input type="checkbox"/>		Bank height Right: <u>3</u> ft. Left: <u>4</u> ft.	
Bank slope Right: <u>90</u> degrees Left: <u>90</u> degrees					
Qualitative Attributes					
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other: mud					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: <u>      </u> % <u>5</u> % <u>30</u> % <u>25</u> % <u>      </u> % <u>30</u> % <u>      </u> % <u>      </u> %					
Width of Riparian Zone: N/A <input type="checkbox"/> <u>45</u> ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: <input type="checkbox"/> Saplings/Shrubs: <input type="checkbox"/> Herbs Avg. DBH of Dominants: <u>16</u> in. <u>2</u> in. <u>      </u> in. (approx.)			
Dominant vegetation: <i>Athyrium filix-femina</i> , <i>Carex bromoides</i> , <i>Alnus, incana</i> , <i>Osmunda claytoniana</i>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf litter, riffles, runs, pools, logjams, moss, tussocks					
Aquatic Organisms Observed (list): None observed					
T&E Species Observed (list): none					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none					
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low					



**Waterbody ID:**

sasw017

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

**Notes:**

Stream substrate varies upstream to downstream. Begins as cobble dominated ephemeral, dry swale upstream, then becomes intermittent stream downstream with water and flow

**Waterbody Sketch** *(Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)*











# Linear Waterbody Data Sheet

Survey Description					
Project Name: Line 5 Relocation Project		Waterbody Name: Unnamed stream/swale		Waterbody ID: sasw018	Date: 10/9/2019
State: WI	County: Ashland	Company: WEST	Crew Member Initials: ES, WC	Photos: 8011, 8018	
Tract Number(s): WI-AS-400-724.000		Nearest Milepost 29.8		Associated Wetland ID(s): wasw037ss, 037f	
Survey Type: (check one) <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:					
Physical Attributes					
Stream Classification: (check one) <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial					
Waterbody Type: (check one) <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input checked="" type="checkbox"/> Other: swale, forested					
OHWM Width: <u>2</u> ft. Height: <u>3in</u> N/A <input type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Width of Waterbody - Top of Bank to Top of Bank: <u>45ft</u> ft.		Width of Waterbody - Toe of Slope to Toe of Slope: <u>4</u> ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> <u>10in</u>	
Depth of Water: (Approx.) N/A <input type="checkbox"/> <u>0.5</u> ft.		Bank height Right: <u>5.5 ft.</u> Left: <u>5</u> ft.		Bank slope Right: <u>30</u> degrees Left: <u>30</u> degrees	
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: (Approx.) <u>0</u> fps N/A <input type="checkbox"/>			
Qualitative Attributes					
Water Appearance: (check one) <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other: mud					
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: <u>      </u> % <u>      </u> % <u>      </u> % <u>      </u> % <u>      </u> % <u>20</u> % <u>80</u> % <u>      </u> %					
Width of Riparian Zone: N/A <input type="checkbox"/> <u>45</u> ft.		Vegetative Layers: (check all that apply) <input type="checkbox"/> Trees: <u>18</u> in. <input type="checkbox"/> Saplings/Shrubs: <u>2</u> in. <input type="checkbox"/> Herbs: <u>      </u> in. Avg. DBH of Dominants: (approx.)			
Dominant Bank Vegetation (list): <i>Dryopteris carthusiana, Carex bromoides</i>					
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf litter, logs, sticks					
Aquatic Organisms Observed (list):					
T&E Species Observed (list):					
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes):					
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated					
Stream Quality <sup>a</sup> : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low					



**Waterbody ID:**

sasw018

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

**Notes:**

Forested ephemeral swale connecting wasw037ss and wasw037f. Puddles present, minimal flow west. Fair aquatic habitat

**Waterbody Sketch** (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-05	<b>Waterbody Survey ID:</b> sasd010p
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Montreal Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> AGG/OTG	<b>Latitude:</b> 46.329194	<b>Longitude:</b> -90.637805
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Small perennial feature associated with wasd012s.			
Measurements			
<b>Depth of Water:</b> <u>0.75</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>5</u> ft. <input type="checkbox"/> N/A	
<b>OHWM Width:</b> <u>5</u> ft.			
<b>OHWM Indicator:</b> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Alnus incana, Carex crinita.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools, riffles, litter and debris.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Flows under an ATV trail through a culvert.			
<b>Observation Notes:</b> Feature is a small perennial stream that flows through an alder thicket. The feature terminates in Montreal Creek outside of the survey corridor.			



sasd010p\_E (upstream)



sasd010p\_S (across)





sasd010p\_W (downstream)

## Open Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-14	<b>Waterbody Survey ID:</b> oasd002
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> None	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> MAL/AGG	<b>Latitude:</b> 46.335178	<b>Longitude:</b> -90.656098
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
<b>Waterbody Type:</b> <input checked="" type="checkbox"/> Stock Pond <input type="checkbox"/> Natural Pond <input type="checkbox"/> Fishing Pond <input type="checkbox"/> Lake <input type="checkbox"/> Other <i>(check one)</i>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
<b>Feature Quality:</b> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low <i>(check one)</i>			
<b>Feature Description:</b> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
<b>Description Notes:</b> The artificial pond is associated with wetland wasd022e and located near a residence.			
Measurements			
<b>Depth of Water:</b> _____ ft. <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Unknown			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
<b>Vegetation Layers:</b> <input type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
<b>Dominant Bank Vegetation (list):</b> Typha sp., Scirpus cyperinus, Alnus incana, Ilex verticillata.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Open water.			
<b>Aquatic Organisms Observed (list):</b> Tadpoles.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Residential land use at the margin and high invasive species cover.			
<b>Observation Notes:</b> None.			





oasd002\_S



oasd002\_SW





oasd002\_W



# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-07	<b>Waterbody Survey ID:</b> sasb006p
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> Bad River	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> MAL/SAM	<b>Latitude:</b> 46.336610	<b>Longitude:</b> -90.654267
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input checked="" type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Turbid due to red parent material.			
Measurements			
<b>Depth of Water:</b> _____ ft. N/A <input type="checkbox"/> Unknown <input checked="" type="checkbox"/>		<b>Water Edge to Water Edge:</b> <u>60</u> ft. N/A <input type="checkbox"/>	
<b>OHWM Width:</b> <u>60</u> ft.			
<b>OHWM Indicator:</b> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Banks dominated by Acer saccharinum and Phalaris arundinacea.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Riffles, woody debris.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Erosion, existing powerline. Invasive species cover along banks.			
<b>Observation Notes:</b> Disturbed stretch of the Bad River with relatively densely vegetated banks.			



sasb006p\_E (downstream)



sasb006p\_NE (across)





sasb006p\_NW (upstream)

## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-05	<b>Waterbody Survey ID:</b> sasb001p
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> Bad River	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> MAL/SAM	<b>Latitude:</b> 46.335250	<b>Longitude:</b> -90.651829
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
<b>Waterbody Type:</b> <input checked="" type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated <i>(check one)</i>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
<b>Description Notes:</b> Turbid due to red parent material. Hydrology influenced by artificial berm.			
Measurements			
<b>Depth of Water:</b> _____ ft. N/A <input type="checkbox"/> Unknown <input checked="" type="checkbox"/>		<b>Water Edge to Water Edge:</b> <u>50</u> ft. N/A <input type="checkbox"/>	
<b>OHWM Width:</b> <u>60</u> ft.			
<b>OHWM Indicator:</b> <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
<b>Vegetation Layers:</b> <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input type="checkbox"/> Herbs <i>(check all that apply)</i>			
<b>Dominant Bank Vegetation (list):</b> None.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Overhanging vegetation, woody debris.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Nearby berm.			
<b>Observation Notes:</b> None.			





sasb001p\_NW (upstream)



sasb001p\_S (downstream)





sasb001p\_W (across)



## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-03	<b>Waterbody Survey ID:</b> sasd007p
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> Montreal Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> AGG/OTG	<b>Latitude:</b> 46.332983	<b>Longitude:</b> -90.635366
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Perennial river associated with wetland wasd009s.			
Measurements			
<b>Depth of Water:</b> <u>4</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>25</u> ft. <input type="checkbox"/> N/A	
<b>OHWM Width:</b> <u>30</u> ft.			
<b>OHWM Indicator:</b> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input checked="" type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Abies balsamea, Alnus incana, Pteridium aquilinum.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Overhanging vegetation, pools.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
<b>Observation Notes:</b> The feature is a perennial stream that flows through forest. The banks on the south side of the feature are exposed bedrock.			



sasd007p\_NE (upstream)



sasd007p\_SE (across)





sasd007p\_SW (downstream)

# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-10-03	<b>Waterbody Survey ID:</b> sasd006i
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Montreal Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> AGG/OTG	<b>Latitude:</b> 46.334165	<b>Longitude:</b> -90.633837
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Intermittent stream which flows into Montreal Creek (sasd007p) outside the survey area.			
Measurements			
<b>Depth of Water:</b> <u>0.5</u> ft. <input type="checkbox"/> N/A <input type="checkbox"/> Unknown		<b>Water Edge to Water Edge:</b> <u>2</u> ft. <input type="checkbox"/> N/A	
<b>OHWM Width:</b> <u>3</u> ft.			
<b>OHWM Indicator:</b> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input checked="" type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Betula alleghaniensis, Alnus incana, Abies balsamea, Dryopteris intermedia, Pteridium aquilinum.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools, riffles, overhanging vegetation.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Culvert.			
<b>Observation Notes:</b> The feature is a natural picturesque babbling brook that flows through mesic forest and into Montreal Creek.			





sasd006i\_N (across)



sasd006i\_NW (upstream)





sasd006i\_SE (downstream)



# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed tributary to Scott Taylor Creek		Waterbody ID: SASV010
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: CS, CC
Tract Number(s): WI-AS-231.00, WI-AS-232.000		Nearest Milepost: 26.9	Associated Wetland ID(s): WASV035, WASV036	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input checked="" type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 4.5 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 2 ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 6 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 4 ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> 4 ft.
Depth of Water: (Approx.) N/A <input type="checkbox"/> 6 in.				
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) N/A <input checked="" type="checkbox"/> fps		Bank height: Right: 3 ft. Left: 5 ft.
				Bank slope: Right: 90 degrees Left: 70 degrees
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% 40% 50% _____% 10% _____%				
Width of Riparian Zone: 300 ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: (approx.) 8 in. 2 in. _____ in.		
Dominant Bank Vegetation (list): <i>Carex bromoides, Betula alleghaniensis, Acer saccharum</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): pools, overhanging banks, overhanging roots				
Aquatic Organisms Observed (list): None				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SASV010

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

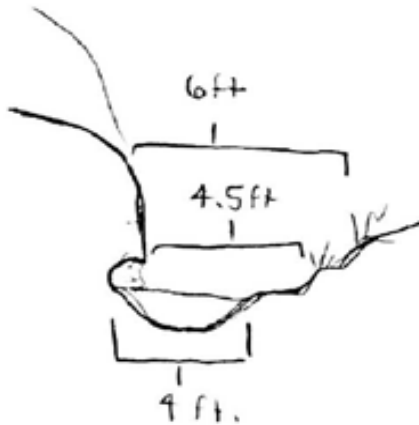
**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

#### Notes:

Intermittent stream SASV010i flows north and dissipates into WASV035. No flowing water at time of survey, but water present in pools. Clear bed and bank and substrate sorting present in reach. A headcut at WASV036 signals an ephemeral/intermittent break in channel.

Ephemeral reach SASV010e has an OHHW 1ft wide and 6in depth. Top of bank is 1ft on right and 1ft on left with 90% bank slope on both sides. No water present in reach, and bed and bank are less clear in some areas. Substrate is 90% silt/clay and 10% gravel. No habitat for aquatic species.

#### Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



#### EPH DATA:

- OHHW - 1ft w x 0.5ft deep
- TOB - 1ft R&L - 1ft, 90°
- No water
- Bed/bank less clear in areas.
- No water.
- Substrate - 90% silt/clay 10% gravel.
- No hab







Photograph 1: SASV010i, South, Upstream



Photograph 2: SASV010i, North, Downstream





Photograph 3: SASV010i, East, Across Stream



Photograph 4: SASV010i, North, Upstream, Headcut





Photograph 5: SASV010e, North, Downstream



Photograph 6: SASV010e, South, Upstream





Photograph 7: SASV010e, East, Across Stream



# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed tributary to Scott Taylor Creek		Waterbody ID: SASV009e
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: CS, CC
Tract Number(s): WI-AS-233.00		Nearest Milepost: 27.3		Photos: 3 (US, DS, CS)
Associated Wetland ID(s): WASV029				
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 2 ft.		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 1 ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 2 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 2 ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> ft.
Depth of Water: (Approx.) N/A <input checked="" type="checkbox"/> in.				
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) N/A <input checked="" type="checkbox"/> fps		Bank height Right: 1 ft. Left: 1 ft.
Bank slope Right: 90 degrees Left: 90 degrees				
Qualitative Attributes				
Water Appearance: (check one) <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% 40% 55% _____% 5% _____%				
Width of Riparian Zone: 300 ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: (approx.) 1 in. 1 in. _____ in.		
Dominant Bank Vegetation (list): <i>Carex bromoides, Dryopteris intermedia, Arthyrium filix-femina</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs				
Aquatic Organisms Observed (list): None				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

SASV009e

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

#### Notes:

Ephemeral drainage originating on hillslope within WASV029. Stream is lost once it flows into PEM portion of wetland. Drainage continues through roadbed and downslope but is no longer channelized.

**Waterbody Sketch** (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

NO WATER

1ft - [ ]

2ft







Photograph 1: SASV009e, South, Upstream



Photograph 2: SASV009e, North, Downstream





Photograph 3: SASV009e, West, Across Stream



## **APPENDIX F**

Waterbody Data Sheets

Part 18 of 24

# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed tributary to Scott Taylor Creek		Waterbody ID: SASV008i
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: CS, CC
Tract Number(s): WI-AS-233.00		Nearest Milepost: 27.3		Photos: 3 (US, DS, CS)
Associated Wetland ID(s): WASV028, WASV029				
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 3 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 6 in.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 6 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 4 ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> 2-3 ft.
Depth of Water: (Approx.) N/A <input type="checkbox"/> 1-2 in.				
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) N/A <input checked="" type="checkbox"/> fps		Bank height: Right: 4 ft. Left: 1 ft.
Bank slope: Right: 20 degrees Left: 60 degrees				
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% 40% 50% _____% 10% _____%				
Width of Riparian Zone: N/A <input type="checkbox"/> >500 ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: 18 in. <input checked="" type="checkbox"/> Saplings/Shrubs: 2 in. <input checked="" type="checkbox"/> Herbs: _____ in.		
Avg. DBH of Dominants: (approx.)				
Dominant Bank Vegetation (list): Impatiens capensis, Carex bromoides, Betula alleghaniensis				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs				
Aquatic Organisms Observed (list): 1 Coleoptera, 1 water beetle, 1 Ephemeroptera				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				



Waterbody ID:

SASV008i

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

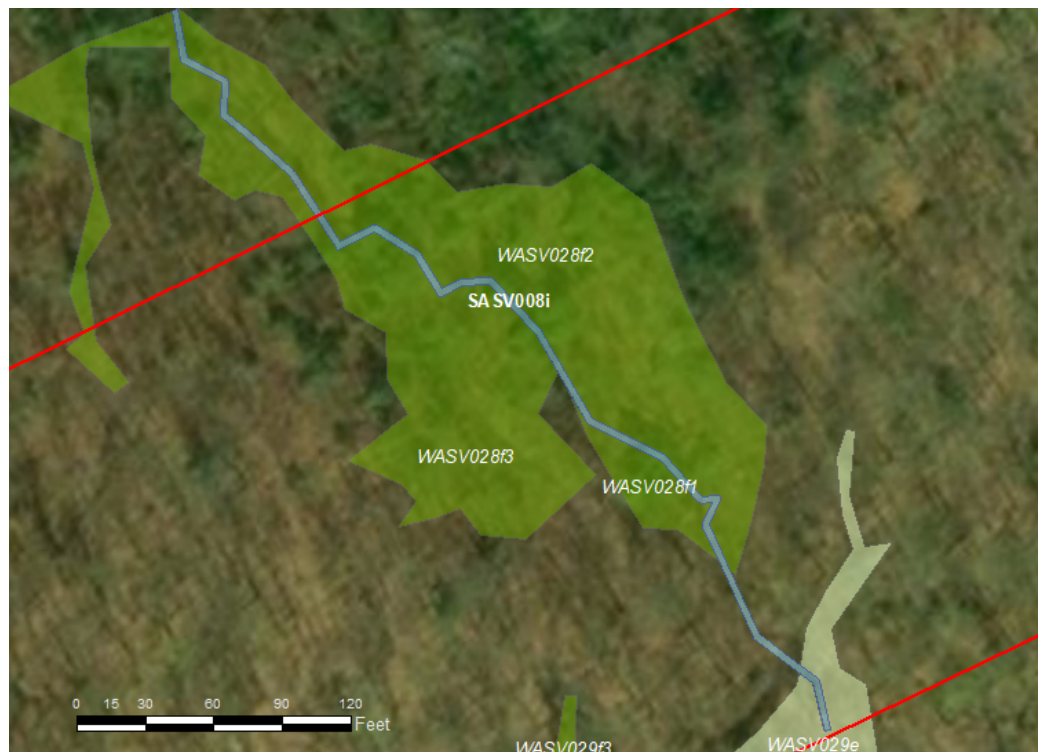
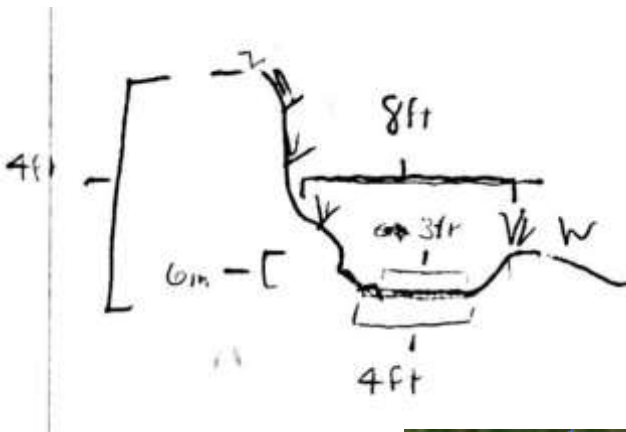
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

#### Notes:

No water was flowing through SASV008i at the time of survey, but there were standing pools of water throughout. A small section of the stream reach (approximately 20 feet) is borderline ephemeral; it was included as intermittent due to the presence of intermittent reaches both immediately upstream and downstream from it. Stream SASV008i originates at WASV029 and flows northward through WASV028, which acts as its floodplain.

#### Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



Linear Waterbody Point Photographs  
Line 5 Wetland Delineation  
September 24, 2019, Page 1 of 2



Photograph 1: SASV008i, South, Upstream



Photograph 2: SASV008i, North, Downstream





Photograph 3: SASV008i, West, Across Stream

# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed tributary to Scott Taylor Creek		Waterbody ID: SASV012e
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: CS, CC
Tract Number(s): WI-AS-235.000, WI-AS-233.000		Nearest Milepost: 27.4	Associated Wetland ID(s): WASV045	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 1 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 1 ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 1 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 1 ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> ft.
Depth of Water: (Approx.) N/A <input checked="" type="checkbox"/> in.				
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) N/A <input checked="" type="checkbox"/> fps		Bank height: Right: 3 ft. Left: 1 ft.
				Bank slope: Right: 80 degrees Left: 90 degrees
Qualitative Attributes				
Water Appearance: (check one) <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% _____% _____% _____% 90% 10% _____%				
Width of Riparian Zone: 300 ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: (approx.) 6 in. 1 in. N/A in.		
Dominant Bank Vegetation (list): <i>Carex scabrata, Betula alleghaniensis, Fraxinus nigra</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): None				
Aquatic Organisms Observed (list): None				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				



Waterbody ID:

SASV012e

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

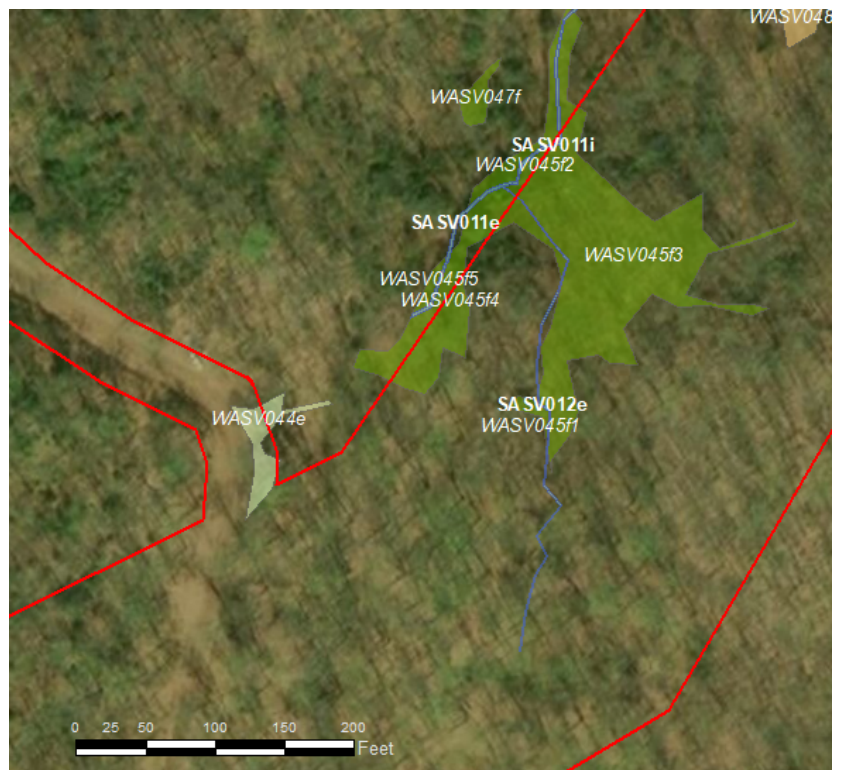
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

#### Notes:

Ephemeral channel originates in WASV045 and drains downslope; connects with SASV011i directly before the ephemeral/intermittent break. No flowing water at time of survey. Stream is seepy and goes subterranean for short period before connecting to SASV011e. Roots of trees in streambed.

**Waterbody Sketch** (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Linear Waterbody Point Photographs  
Line 5 Wetland Delineation  
September 27, 2019, Page 1 of 2



Photograph 1: SASV012e, East, Upstream



Photograph 2: SASV012e, West, Downstream





Photograph 3: SASV012e, South, Across Stream

# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed tributary to Scott Taylor Creek		Waterbody ID: SASV011
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: CS, CC
Tract Number(s): WI-AS-235.000		Nearest Milepost: 27.4	Associated Wetland ID(s): WASV045, WASV046	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input checked="" type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 4 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 1 ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 6 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 3 ft.		Width of Waterbody - Water Edge to Water Edge: 3 ft.
Depth of Water: (Approx.) 3-4 in.		N/A <input type="checkbox"/>		N/A <input type="checkbox"/>
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) 1 fps		Bank height: Right: 3 ft. Left: 3 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		Bank slope: Right: 90 degrees Left: 70 degrees
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% 30% 50% _____% 20% _____% _____%				
Width of Riparian Zone: N/A <input type="checkbox"/> >500 ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: (approx.) 6 in. 1 in. N/A in.		
Dominant Bank Vegetation (list): <i>Carex scabrata, Betula alleghaniensis, Acer saccharum</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): pools, overhanging banks, overhanging roots, leaf packs, riffles				
Aquatic Organisms Observed (list): None				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				



Waterbody ID:

SASV011

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

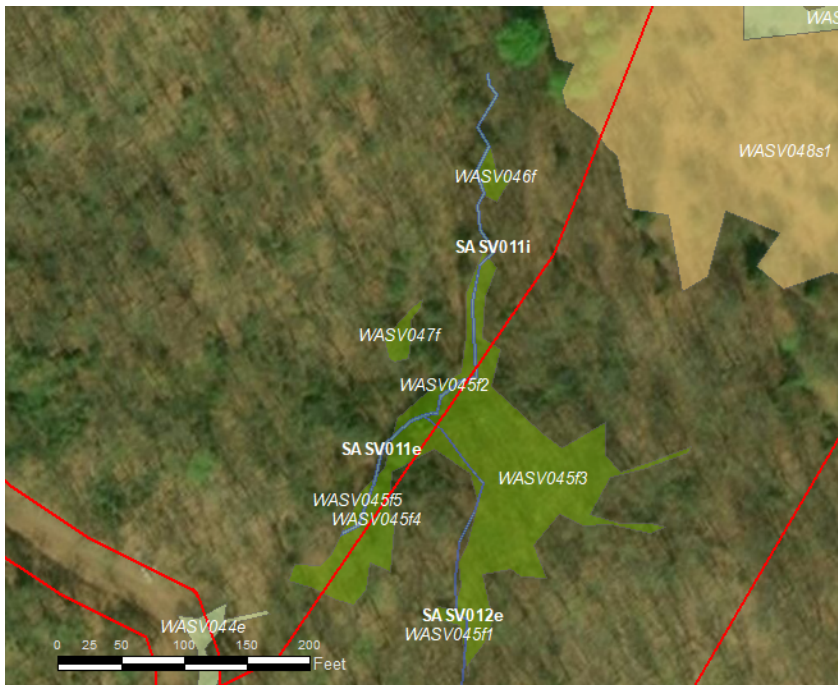
**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

#### Notes:

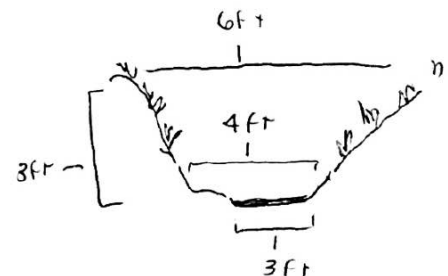
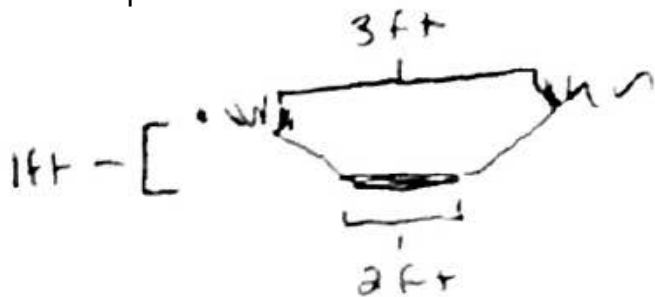
Stream originates within WASV045 as an ephemeral channel. A headcut signals the intermittent / ephemeral break. The intermittent portion of the channel shows signs of bank erosion, substrate sorting, strong bed and bank and reduced leaf litter in stream. Groundwater seeping from banks into stream. Section of stream is borderline perennial. Because the water is so low and the water is flowing very little, we think the current flow is due to recent rains and that in drier times, flow would be absent.

Ephemeral portion has weak bed and bank, leaf litter in channel, little substrate sorting, no riffle/pool sequence. The left bank and right bank are 1ft high with 30% slopes. Top of bank to top of bank is 3ft and toe of slope is 2ft width of water edge to water edge is 2ft. OHWM is 1ft tall and 2ft wide. Vegetations is missing and there is a clear line. Substrate is 90% organic and 10% gravel.

#### Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



Ephemeral







Photograph 1: SASV011i, South, Upstream



Photograph 2: SASV011i, North, Downstream





Photograph 3: SASV011i, East, Across Stream



Photograph 4: SASV011i, South, Headcut





Photograph 5: SASV011e, East, Across Stream



Photograph 6: SASV011e, North, Downstream





Photograph 7: SASV011e, South, Upstream

# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed tributary to Scott Taylor Creek		Waterbody ID: SASV015e
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: DCR, CDC
Tract Number(s): WI-AS-237.000, WI-AS-238.000		Nearest Milepost: 28.3	Associated Wetland ID(s): WASV052	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input checked="" type="checkbox"/> Other: Linear Swale				
OHWM Width: 1 ft.		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 0.5 ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 2 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 1 ft.		Width of Waterbody - Water Edge to Water Edge: 1 ft.
Depth of Water: (Approx.) 2-3 in.		N/A <input type="checkbox"/>		
Sinuosity: (check one) <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: (Approx.) 0.5 fps		Bank height Right: 1 ft. Left: 1 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		Bank slope Right: 90 degrees Left: 90 degrees
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% _____% _____% 20% 80% _____% _____%				
Width of Riparian Zone: 200 ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: (approx.) 4 in. 1 in. N/A in.		
Dominant Bank Vegetation (list): Salix bebbiana, Athyrium filix-femina, Fraxinus nigra				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): None				
Aquatic Organisms Observed (list): None				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Roadside				
Waterbody is: (check one) <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				



Waterbody ID:

SASV015e

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

#### Notes:

Naturalized ditch-turned-swale alongside edge of rock wall. Swale only runs for about 30 feet through PSS portion of WASV052 to PEM portion, where it dissipates into roadside drainage feature. Swale has weak bed and bank, leaf litter in bed, clear drainage pattern, and roots across bank. Feature GPSed to capture channelization within wetland. Flowing water was present at time of survey due to recent rains.

#### Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



Linear Waterbody Point Photographs  
Line 5 Wetland Delineation  
October 1, 2019, Page 1 of 2



Photograph 1: SASV015e North, Downstream



Photograph 2: SASV015e, South, Upstream





Photograph 3: SASV015e, West, Across Stream

# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed tributary to Scott Taylor Creek		Waterbody ID: SASV016i
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: DCR, CDC
Tract Number(s): WI-AS-238.00		Nearest Milepost: 28.3	Associated Wetland ID(s): WASV053	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 1 ft.		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 0.5 ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 3 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 1 ft.		Width of Waterbody - Water Edge to Water Edge: 1 ft.
Depth of Water: (Approx.) 2-3 in.		N/A <input type="checkbox"/>		N/A <input type="checkbox"/>
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) 0.25 fps		Bank height Right: 1 ft. Left: 1 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		Bank slope Right: 70 degrees Left: 70 degrees
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% 40% 50% 10% _____% _____% _____%				
Width of Riparian Zone: N/A <input type="checkbox"/> >500ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
Avg. DBH of Dominants: (approx.)		6 in. 1 in. N/A in.		
Dominant Bank Vegetation (list): Carex scabrata, Fraxinus nigra, Tsuga canadensis				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Riffles, pools				
Aquatic Organisms Observed (list): 1 frog; 2 Gerridae				
T&E Species Observed (list): Polystichum braunii: S3, ST				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Access road for tree clearing				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				



Waterbody ID:

SASV016i

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

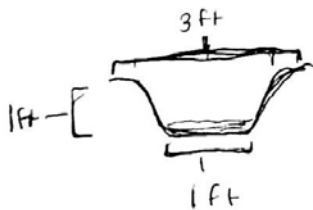
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

#### Notes:

SASV016i originates within WASV053 and flows northwest-ward outside of the study area. One individual of *Polystichum braunii* identified near stream headwaters. Upper portion of stream is braided and somewhat wider. Area immediately along streambank is dominated by hemlock, but greater wetland area is *Fraxinus*-dominated.

#### Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)







Photograph 1: SASV016i, North, Upstream



Photograph 2: SASV016i, South, Downstream





Photograph 3: SASV016i, West, Across Stream

# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed tributary to Scott Taylor Creek		Waterbody ID: SASV013
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: CC, CR
Tract Number(s): WI-AS-238.000		Nearest Milepost 27.7		Associated Wetland ID(s): WASV050
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 3 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 1 ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 4 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 3 ft.		Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> 2.5 ft.
Depth of Water: (Approx.) N/A <input checked="" type="checkbox"/> 2-4 in.				
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) 0.25 fps N/A <input type="checkbox"/>		Bank height Right: 8 ft. Left: 8 ft.
Bank slope Right: 90 degrees Left: 90 degrees				
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% _____% 80% _____% 20% _____% _____%				
Width of Riparian Zone: 200 ft. N/A <input type="checkbox"/>		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
Avg. DBH of Dominants: (approx.) 14 in.		2 in. N/A in.		
Dominant Bank Vegetation (list): <i>Carex crinita</i> , <i>Carex bromoides</i> , <i>Abies balsamea</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Overhanging banks, leaf packs, riffles, pools				
Aquatic Organisms Observed (list): <i>Gerridae</i> (10+ observed)				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Culvert underneath access road.				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				



Waterbody ID:

SASV013

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

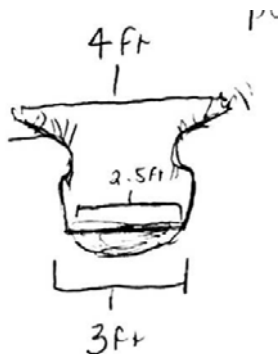
**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

#### Notes:

Stream SASV013 is exhibiting low flow. A portion of WASV050f acts as a floodplain to the stream. There are no roots in the streambed, and there is a clear bed and bank, substrate sorting, and riffle/pool sequences. SASV013i is culverted for approximately 30ft. under existing gravel road. Stream widens to >10ft west of culvert and stream flow stops. Standing pools of water are present in western portion of stream. On western portion of stream there are deep downcuts with the left bank and right bank up to 8ft tall. Slope is 90% on each side, and grade control present with leaf packs.

At PEM opening there is an intermittent/perennial. Timber crosses stream for logging access. Banks up to 10ft wide with undercut banks. Western side flows through WASV054.

#### Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)







Photograph 1: SASV013, East, Upstream



Photograph 2: SASV013, West, Downstream





Photograph 3: SASV013, North, Across Stream

# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed tributary to Scott Taylor Creek		Waterbody ID: SASV017e
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: DCR, CDC
Tract Number(s): WI-AS-240.001		Nearest Milepost: 28.7		Photos: 3 (US, DS, CS)
Associated Wetland ID(s): WASV056				
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: ____ ft.  Height: ____ ft. N/A <input checked="" type="checkbox"/>		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining  <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: ____ 5 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: ____ 4 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> ____ ft.	Depth of Water: (Approx.) N/A <input type="checkbox"/> ____ 2-3 in.	
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: (Approx.) ____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: ____ 3 ft. Left: ____ 3 ft.	Bank slope Right: ____ 80 degrees Left: ____ 80 degrees	
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: ____ % ____ 10 % ____ 60 % ____ 20 % ____ % ____ 10 % ____ % ____ %				
Width of Riparian Zone: N/A <input type="checkbox"/> ____ >50ft.	Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: (approx.) ____ 4 in. ____ 1 in. N/A in.			
Dominant Bank Vegetation (list): <i>Fraxinus nigra, Abies balsamea, Athyrium filix-femina</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): pools				
Aquatic Organisms Observed (list): None				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Area has been logged				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low				



Waterbody ID:

SASV017e

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

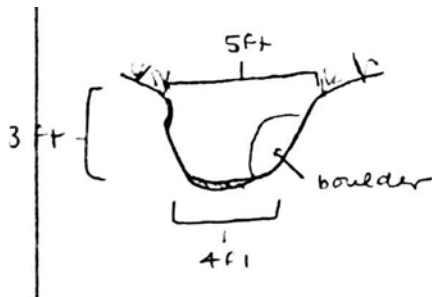
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

#### Notes:

Ephemeral stream did not have characteristics of OHWM; SASV017 originates in PFO portion of WASV056 and then runs approximately 30ft to a PFO/PEM wetland break where bed and bank is lost. Channel downcutting, substrate sorting, missing leaf litter in streambed and standing pools of water 2-3in deep observed in reach.

#### Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)







Photograph 1: SASV017e, East, Upstream



Photograph 2: SASV017e, West, Downstream





Photograph 3: SASV017e, North, Across Stream

# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed tributary to Scott Taylor Creek		Waterbody ID: SASV014i
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: DCR, CDC
Tract Number(s): WI-AS-240.00		Nearest Milepost: 28.7		Photos: 3 (US, DS, CS)
Associated Wetland ID(s): WASV051				
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 1 ft.		OHWM Indicator: (check all that apply) <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 0.5 ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 2 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 1 ft.		Width of Waterbody - Water Edge to Water Edge: 1 ft.
Depth of Water: (Approx.) 0.5 ft.		N/A <input type="checkbox"/>		
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) 0.5 fps		Bank height Right: 2 ft. Left: 1.5 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		Bank slope Right: 70 degrees Left: 70 degrees
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% _____% 30% 10% 60% _____% _____%				
Width of Riparian Zone: 150 ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: (approx.) 8 in. 2 in. N/A in.		
Dominant Bank Vegetation (list): Acer saccharum, Athyrium filix-femina, Quercus rubra				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs				
Aquatic Organisms Observed (list): None				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None				
Waterbody is: (check one) <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				



Waterbody ID:

SASV014i

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

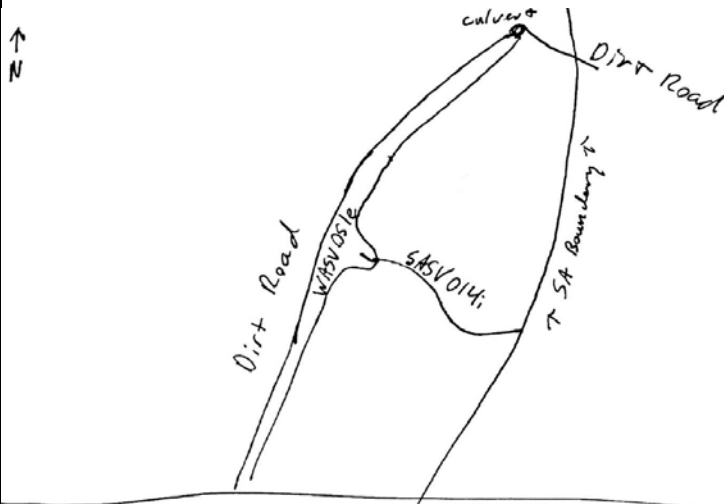
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

#### Notes:

SASV014i is a moss lined intermittent stream originating outside of the study area and dissipating into WASV051. Leaf packs present in channel with some natural vegetation extending into stream bed, but not more than 1/3 of active channel width on each side.

#### Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Photograph 1: SASV014i, East, Upstream



Photograph 2: SASV014i, West, Downstream





Photograph 3: SASV014i, North, Across Stream

# Linear Waterbody Data Sheet

Survey Description				
Project Name: Line 5		Waterbody Name: Unnamed tributary to Scott Taylor Creek		Waterbody ID: SASV018i
State: Wisconsin		County: Ashland	Company: VHB	Crew Member Initials: DCR, CDC
Tract Number(s): WI-AS-240.000, WI-AS-240.001		Nearest Milepost: 28.7	Associated Wetland ID(s): WASV057	
Survey Type: (check one) <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: (check one) <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: (check one) <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 1 ft.		OHWM Indicator: (check all that apply) <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
Height: 1 ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 10 ft.		Width of Waterbody - Toe of Slope to Toe of Slope: 1 ft.		Width of Waterbody - Water Edge to Water Edge: 1 ft.
Depth of Water: (Approx.) 0.5 ft.		N/A <input type="checkbox"/>		N/A <input type="checkbox"/>
Sinuosity: (check one) <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: (Approx.) 1 fps		Bank height Right: 2 ft. Left: 2 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		Bank slope Right: 45 degrees Left: 45 degrees
Qualitative Attributes				
Water Appearance: (check one) <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: (check all that apply) <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% 60% 30% 10% _____% _____% _____%				
Width of Riparian Zone: 100ft.		Vegetative Layers: (check all that apply) <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: (approx.) 6 in. 1 in. N/A in.		
Dominant Bank Vegetation (list): <i>Carex crinita, Fraxinus nigra, Rumex crispus, Scirpus hattorianus</i>				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Submerged wood (logging debris)				
Aquatic Organisms Observed (list): None				
T&E Species Observed (list): None				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Logging debris, stream rutted.				
Waterbody is: (check one) <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated				
Stream Quality <sup>a</sup> : (check one) <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				



Waterbody ID:

SASV018i

<sup>a</sup> **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

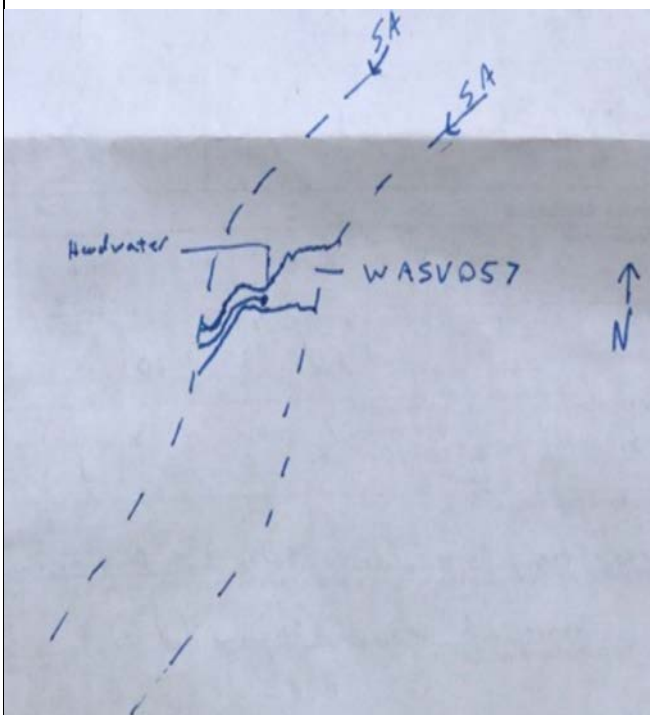
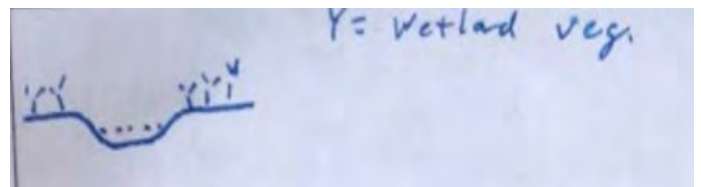
**Moderate Quality:** Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

**Low Quality:** Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

#### Notes:

SASV018i originates from WASV057 and flows southwestward off-site. Stream is experiencing significant disturbance from logging activities, including sedimentation into stream and excessive woody debris filling stream channel.

#### Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)







Photograph 1: SASV018i, East, Upstream



Photograph 2: SASV018i, West, Downstream





Photograph 3: SASV018i, North, Across Stream

## **APPENDIX F**

Waterbody Data Sheets

Part 19 of 24



## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-06	<b>Waterbody Survey ID:</b> sasa007e
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Gehrman Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> NTT/DGL	<b>Latitude:</b> 46.363778	<b>Longitude:</b> -90.593931
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Roadside ditch dominated by sensitive fern.			
Measurements			
<b>Depth of Water:</b> _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> _____ ft. N/A <input checked="" type="checkbox"/> <b>OHWM Width:</b> <u>  1  </u> ft.	
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Onoclea sensibilis, Symphyotrichum lanceolatum, Phalaris arundinacea.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Roadside ditch.			
<b>Observation Notes:</b> Currently dry.			



sasa007e\_E (downstream)



sasa007e\_N (across)





sasa007c\_W (upstream)

# Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-06	<b>Waterbody Survey ID:</b> sasa006e
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Gehrman Creek	
<b>Company:</b> Enbridge`	<b>Crew Member Initials:</b> NTT/DGL	<b>Latitude:</b> 46.365087	<b>Longitude:</b> -90.591332
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> Roadside ditch located adjacent to a maple basswood forest.			
Measurements			
<b>Depth of Water:</b> _____ ft.    N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> _____ ft.    N/A <input checked="" type="checkbox"/>	
<b>OHWM Width:</b> <u>  1  </u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Onoclea sensibilis, Phalaris arundinacea, Scirpus cyperinus, Agrostis gigantea.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Located within a roadside ditch.			
<b>Observation Notes:</b> No surface water currently present.			





sasa006e\_N (upstream)



sasa006e\_S (downstream)





sasa006c\_W (across)



## Waterbody Data Sheet

Description			
<b>Project Name:</b> Line 5 Relocation Project		<b>Date:</b> 2019-09-06	<b>Waterbody Survey ID:</b> sasa005e
<b>State:</b> WI	<b>County/Parish:</b> Ashland	<b>USGS Waterbody Name:</b> UNT to Gehrman Creek	
<b>Company:</b> Enbridge	<b>Crew Member Initials:</b> NTT/DGL	<b>Latitude:</b> 46.365124	<b>Longitude:</b> -90.591167
<b>Survey Type:</b> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <small>(check one)</small>			
<b>Waterbody Type:</b> <input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <small>(check one)</small>			
<b>Water Appearance:</b> <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <small>(check one)</small>			
<b>Existing Condition<sup>a</sup>:</b> <input type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <small>(check one)</small>			
<b>Feature Description:</b> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <small>(check one)</small>			
<b>Flow Regime:</b> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <small>(check one)</small>			
<b>Sinuosity within Survey Corridor:</b> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <small>(check one)</small>			
<b>Description Notes:</b> The waterbody is a roadside ditch that runs under a powerline corridor.			
Measurements			
<b>Depth of Water:</b> _____ ft. N/A <input checked="" type="checkbox"/> Unknown <input type="checkbox"/>		<b>Water Edge to Water Edge:</b> _____ ft. N/A <input checked="" type="checkbox"/>	
<b>OHWM Width:</b> <u>  1  </u> ft.			
<b>OHWM Indicator:</b> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <small>(check all that apply)</small>			
<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
<b>Dominant Substrate:</b> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <small>(check all that apply)</small>			
Observations			
<b>Riparian Zone Present:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <small>(check one)</small>			
<b>Vegetation Layers:</b> <input type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <small>(check all that apply)</small>			
<b>Dominant Bank Vegetation (list):</b> Matteuccia struthiopteris, Poa pratensis, Scirpus atrovirens, Solidago gigantea.			
<b>Aquatic Habitats</b> (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
<b>Aquatic Organisms Observed (list):</b> None.			
<b>Disturbances</b> (ex: livestock access, manure in waterbody, waste discharge pipes): Located along a roadside and underneath a powerline corridor.			
<b>Observation Notes:</b> No water currently present.			



sasa005e\_N (upstream)



sasa005e\_S (downstream)





sasa005c\_W (across)